**CBRE** Research

Measuring Tech Industry Impact on Office Markets in North America

**CBRE** 

# Key Takeaways 2015 TECH-THIRTY | CBRE Research

#### HOW WELL IS THE **TECH INDUSTRY** PERFORMING?

The high-tech software/services industry created 730,000 new jobs at a growth rate of 34% since 2009—one-fifth of all new office-using jobs. The sector was also the leading driver of U.S. office market demand, accounting for 20% of major leasing activity in 2015.

#### WHAT IS THE **TOP-RANKED** TECH-THIRTY CITY?

San Francisco topped the Tech-Thirty office markets list for four straight years; its high-tech job base (43%) and office rents (31%) grew at the fastest rate over the past two years. Phoenix shared the top high-tech job growth rate of 43% with San Francisco, but created 4,300 fewer new jobs.

#### WHERE TO FIND HIGH-TECH INDUSTRY **MOMENTUM** MARKETS?

Twenty-four markets exceeded the U.S. high-tech software/services job growth rate of 5.7% between 2012 and 2014, with Austin (33%), Silicon Valley (27%) and Nashville (23%) joining San Francisco and Phoenix to round out the top five.

#### WHICH CITIES **LEAD** THE TECH-THIRTY OFFICE MARKETS?

Sixteen markets posted double-digit rent growth over the past two years, led by San Francisco (31%), Silicon Valley (28%), Raleigh-Durham (23%), San Francisco Peninsula (21%) and Vancouver (18%).

#### WHERE ARE THE RENT **PREMIUMS/DISCOUNTS**?

The strong performance of high-tech submarkets led to substantial rent premiums over the entire Tech-Thirty office market—the aggregate premium was 11%. Within markets, premiums were as high as 87% in East Cambridge, 85% in Santa Monica and 73% in Mountain View. Discounts were also available in a number of emerging tech submarkets, including Reston/Herndon (-23%), St. Louis CBD (-17%) and Northeast Charlotte (-12%).

#### WHERE TO INVEST?

From an investor's perspective, Austin, Salt Lake City, Phoenix and Portland offer further growth potential. These markets are also attractive to occupiers, although Raleigh-Durham, Dallas/Ft. Worth, Charlotte and Nashville offer the best combination of low office rents and a growing high-tech labor pool.

#### HOW LONG WILL THE INDUSTRY STAY **STRONG**?

The high-tech industry is directly supported by consumer demand and a growing number of high-tech integrated businesses, which should keep the industry strong in the years ahead and provide further support for office markets in the Tech-Thirty. Commercial real estate investors must be mindful and have realistic expectations about this historically volatile industry underpinning the health of many Tech-Thirty office markets.

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# The Tech-Thirty



Growth in the high-tech software/services industry is significantly outpacing broader job and office-using employment growth, fueling robust demand for office space in primary tech markets and submarkets. With the addition of more than 730,000 jobs, the U.S. software/services employment sector grew by more than one-third between 2009 and May 2015. By comparison, total employment and office-using employment excluding high-tech each increased by less than 11% over the same period. In 2015, the software/services component added 48,000 jobs through May, compared with the addition of 46,000 during the same period in 2014. At this pace, this year should match or surpass 2014's 150,000 new jobs, the highest annual total for the current expansion period.

Compared with other creative industries, expansion in high-tech software/services dwarfs growth in other sectors (Figure 1). Between 2009 and May 2015, the media-entertainment sector recorded the second-fastest rate of job creation (14.8%), behind the high-tech software/services sector's growth rate of 34.4%.

Employment levels in most of the other major creative

industries have just recently reached their respective 2007 peaks.

Rapid job creation continues to make the high-tech industry the strongest driver of office space demand. High-tech transactions took the largest share of major leasing activity in 2014, 19%—up from 14% in 2013. Its share was 20% through Q2 2015, again exceeding all other industries. In many leading tech markets, the sector is even more dominant: in Silicon Valley, Austin, San Francisco and Seattle, high-tech companies accounted for 88%, 63%, 62% and 60% of major leasing activity through Q2 2015, respectively. With high-tech tenants representing more than 16% of major office requirements to be fulfilled in 54 markets tracked by CBRE Research, this sector is projected to remain the strongest source of demand for office space through 2015.





Source: U.S. Bureau of Labor Statistics and CBRE Research, July 2015.



Within the Tech-Thirty, comprised of leading technology markets in the U.S. and Canada, high-tech software/ services job creation overwhelmingly outperformed the national average (Figure 2). Among these markets, 24 exceeded the 5.7% U.S. software/services job growth rate between 2012 and 2014. San Francisco and Phoenix were the top growth markets—each registered a 42.7% rate of new job creation. Comparing the current period (2012-2014) with the prior period (2011-2013), we found 11 markets posted faster growth, including Silicon Valley, Pittsburgh and Minneapolis. Of the 19 markets with slower growth during these comparison periods, job creation was still strong. Among these were San Francisco, Austin, Nashville, New York, Indianapolis and the San Francisco Peninsula—all of which experienced software/ services sector growth of 15% or higher between 2012 and 2014. Only Washington, D.C. lost software/services jobs over the past two years, due to federal government cutbacks' lingering impact on the local economy.

Silicon Valley led software/services job creation in absolute terms—followed by Seattle, San Francisco, New York and Chicago. These job gains indicate the appeal to tech companies of established, higher-cost tech markets such as San Francisco and Silicon Valley, as well as the rapid expansion of Sunbelt markets—like Phoenix, Austin and Nashville—that offer a skilled labor pool and lower operating costs.

The impact of high-tech job creation on office market rent growth was apparent, with 16 of the Tech-Thirty posting rent growth of 10% or more between Q2 2013 and Q2 2015. The San Francisco Bay Area was once again among the top markets for rent growth, reflecting the region's strong job creation and low vacancy rates. San Francisco, Silicon Valley and the San Francisco Peninsula were also among the top six most concentrated markets in terms of new high-tech jobs as a share of new office jobs, indicating the importance of the high-tech industry as an economic and office-market driver over the past few years. Raleigh-Durham, a low-cost market with a large, skilled workforce, posted the third-fastest rent growth—a major turnaround from its prior period performance (Q2 2012-Q2 2014), when it was the only Tech-Thirty office market other than Detroit to see rents decline.

Office rents within the Tech-Thirty increased in all but two of the primary tech submarkets between Q2 2013 and Q2 2015. Several of the most expensive submarkets posted the strongest rent growth (Figure 3.2), illustrating stiff competition among tenants to locate in highly desirable areas such as Mountain View, SOMA, East Cambridge, Redwood City and Santa Monica. Most of the top submarkets for net absorption during this period were in the Sunbelt and West—among them Mountain View, Southvalley, the Nashville CBD, Northeast Charlotte, Sorrento Mesa and the North Loop (Figure 3.4).



FIGURE 2 HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH, **PAST TWO YEARS** 

# High-Tech Software/Services Job Growth Ranked by growth rate, 2012 to 2014

Office Market Rent Growth
Ranked by growth rate, Q2 2013 to Q2 2015

Ranked by growth rate, 2012 to	2014				Kanke	d by growth rate, $Q22013$ to	Q2 2015	
	GROW'	TH RATE	<b>NEW HIGH</b>	I-TECH JOBS			GROV	VTH RATE
	CURRENT	PRIOR		AS % NEW			CURRENT	PRIOR
RANK MARKET	PERIOD 2012-2014	PERIOD 2011-2013		<b>OFFICE JOBS</b> 2012-2014	RANK	MARKET Q:	<b>PERIOD</b> 2 '13-Q2 '15(	PERIOD
1 San Francisco	42.7%	50.9%	16,976	_		San Francisco	30.7%	34.6%
2 Phoenix	42.7%	18.6%	12,662			Silicon Valley	28.1%	21.4%
3 Austin	33.0%	33.7%	9,313	34.4%		Raleigh-Durham	23.4%	-0.9%
4 Silicon Valley	27.0%	20.0%	25,448	68.4%		San Francisco Peninsula	21.0%	19.3%
5 Nashville	22.7%	29.6%	2,117	10.4%	5	Vancouver	18.4%	14.3%
6 New York	22.6%	22.7%	15,865	30.9%	6	Orange County	16.1%	5.2%
7 Seattle	18.3%	17.0%	18,841	88.1%	7	Boston	14.4%	11.2%
8 Indianapolis	18.0%	20.7%	3,047	10.4%	8	New York	14.1%	17.5%
9 Charlotte	17.3%	13.4%	2,864	13.6%	9	Dallas/Ft. Worth	13.4%	12.0%
10 Salt Lake City	16.2%	15.6%	5,567	22.6%	10	San Diego	12.7%	8.6%
11 Portland	16.1%	12.3%	3,404	16.7%	11	Pittsburgh	12.4%	1.8%
12 San Francisco Pen.	15.0%	30.2%	5,070	42.8%	12	Denver	11.8%	12.7%
13 Chicago	14.9%	19.3%	10,192	26.4%	13	Austin	11.4%	12.2%
14 Raleigh-Durham	14.2%	16.8%	3,853	26.1%	14	Minneapolis	10.9%	7.2%
15 Pittsburgh	14.1%	2.2%	1,734	232.1%	15	Greater Los Angeles	10.9%	9.5%
16 Orange County	12.9%	9.7%	3,448	15.2%	16	Portland	10.7%	6.1%
17 Dallas/Ft. Worth	10.7%	16.4%	8,193	14.3%	17	Seattle	9.4%	8.0%
18 Minneapolis	10.7%	4.5%	4,444	24.0%	18	Nashville	8.9%	8.5%
19 Denver	10.7%	13.3%	5,603	20.0%	19	Salt Lake City	8.8%	4.1%
20 Boston	8.5%	15.8%	7,755	36.1%	20	Phoenix	8.3%	3.7%
21 St. Louis	8.5%	24.6%	1,657	16.6%	21	Charlotte	8.0%	4.3%
22 Atlanta	7.8%	10.5%	4,872	3.8%	22	Chicago	6.2%	3.5%
23 San Diego	7.6%	4.1%	1,980	19.6%	23	Atlanta	6.1%	3.3%
24 Los Angeles	6.7%	11.9%	3,779	11.4%	24	Toronto	5.0%	0.5%
25 Toronto	5.3%	4.2%	4,900	8.0%	25	Indianapolis	4.0%	0.6%
26 Baltimore	4.3%	10.0%	1,283	10.4%	26	Washington, D.C.	3.4%	3.6%
27 Detroit	3.5%	7.7%	1,240		27	St. Louis	3.1%	1.4%
28 Philadelphia	2.5%	3.9%	907	14.6%	28	Philadelphia	3.0%	2.2%
29 Vancouver	2.4%	18.7%	800		29	Detroit	2.9%	-0.7%
30 Washington, D.C.	-2.2%	0.8%	-3,142	76.3%	30	Baltimore	1.0%	3.7%

Source: U.S. Bureau of Labor Statistics, Statistics Canada and CBRE Research, July 2015.

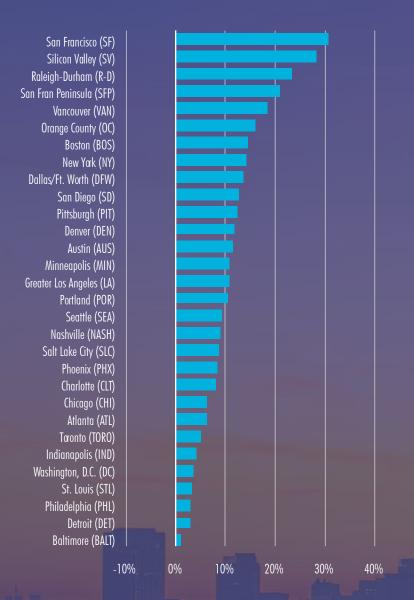
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#### FIGURE 3

#### OFFICE MARKET PERFORMANCE FACTORS, TWO-YEAR GROWTH TREND

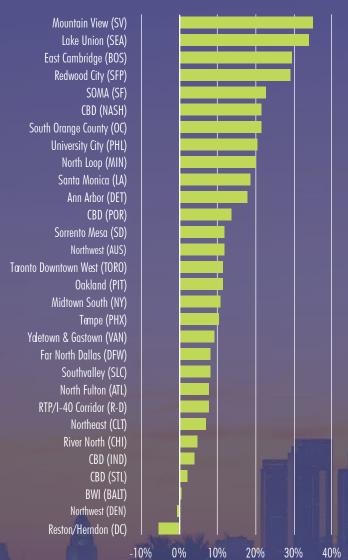


Q2 2013 TO Q2 2015



# FIGURE 3:2 RENT GROWTH TOP TECH SUBMARKE

Q2 2013 TO Q2 2015



Source: CBRE Research, Q2 2015.

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FIGURE 3:3 NET ABSORPTION GROWTH OVERALL MARKET

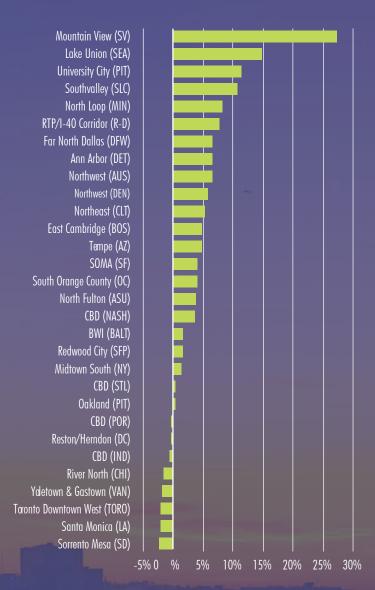
#### Q3 2013 TO Q2 2015 (% OF TOTAL BUILDING STOCK)



Source: CBRE Research, Q2 2015.

# FIGURE 3:4 NET ABSORPTION GROWTH TOP TECH SUBMARKET

Q3 2013 TO Q2 2015 (% OF TOTAL BUILDING STOCK)



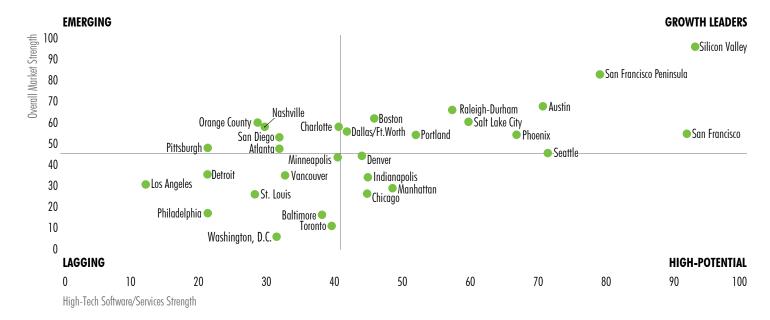
# Spreading Market Strength and Cycle Positioning



The Tech-Thirty Strength Diagram illustrates the strength of each market's high-tech software/services job creation rate and office market performance between Q2 2013 and Q2 2015 (Figure 4). The diagram shows that above-average high-tech software/services job growth generally coincided with above-average office market performance. Silicon Valley led in both respects, followed by the San Francisco Peninsula and San Francisco, both of which boast strong job creation and office market fundamentals.

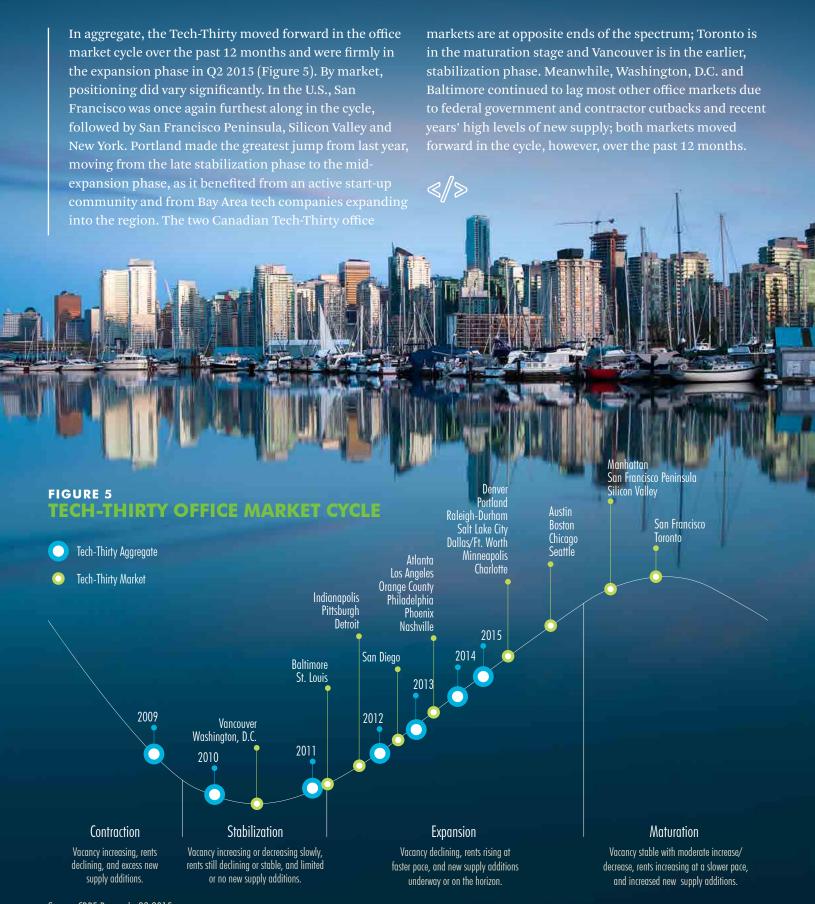
Several lower-cost Sunbelt and Western markets that benefit from Bay Area tenant spillover—including Austin, Salt Lake City, Phoenix and Portland—appear in the Growth Leaders quadrant as well. Sunbelt and Western markets are also well-represented in the Emerging Market quadrant; San Diego, Orange County, Charlotte, Nashville and Dallas-Ft. Worth are counted here, with markedly improved office market conditions observed in many of these metro areas over the past few years.

### FIGURE 4 TECH-THIRTY STRENGTH DIAGRAM



Source: CBRE Research, Q2 2015, U.S. Bureau of Labor Statistics, Statistics Canada, July 2015.

Tech-Thirty Strength Diagram measures the relative strength of the Tech-Thirty office markets on a scale of 0 to 100. High-tech software/services job strength includes high-tech software/services job growth over the past two years and their current concentration within office-using job categories. Office market strength includes rent and net absorption growth over the past two years. The quadrant lines represent the 30-market aggregate average for each strength measure.



# Tech Submarkets Outperform



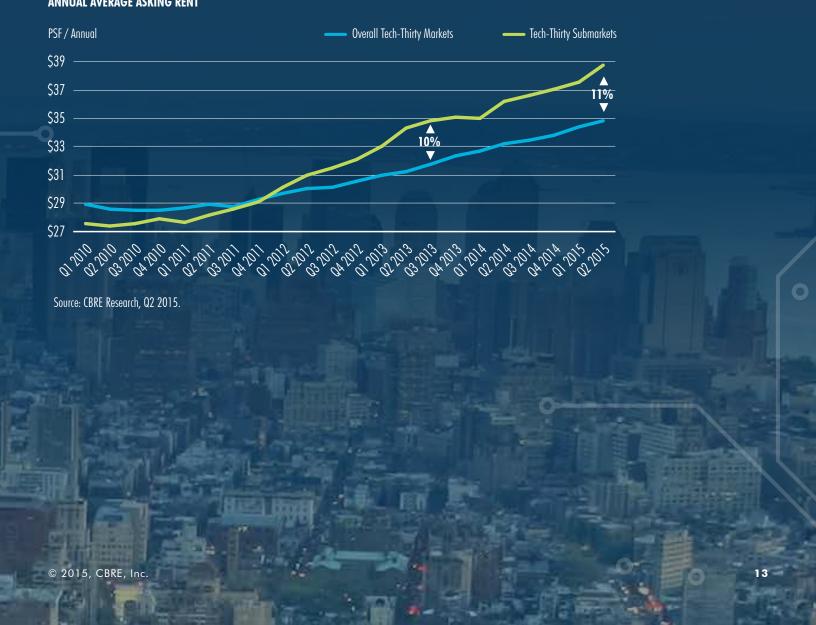
Many leading tech submarkets are outperforming the broader office markets in which they are located. Analyzing data from the top tech submarket in each Tech-Thirty office market, we find that tenants are willing to pay a premium to be in the areas that top tech talent prefer. Many of these submarkets also have supply constraints that contribute to low vacancy rates. In Q2 2015, nine of the top tech submarkets had vacancy rates below 5%; none of the broader Tech-Thirty office markets had vacancy rates below this threshold. Vacancy rates were lowest in Mountain View (1.4%), Oakland in Pittsburgh (2.8%), Gas and Yaletown (3.4%), Ann Arbor (4.1%) and East Cambridge (4.1%). Another commonality connecting many of the tightest office submarkets is their proximity to top-tier educational institutions, which foster research and innovation and provide a pool of well-educated workers to local tech companies.

As the high-tech industry expands during the current cycle, the rent premium paid for office space by tenants in the premier tech submarkets widened (Figure 6). Between 2010 and 2011, the average aggregate asking rent in these top submarkets was less than the corresponding rent in the Tech-Thirty office markets as a whole. The leading submarkets' aggregate rent only surpassed the overall

Tech-Thirty rent in Q1 2012, and the gap has generally increased since then. Indeed, the Q2 2015 premium of 11.1% was the highest of the current cycle, with premier submarket rents higher than their respective overall market rents in 22 of the Tech-Thirty. Rent premiums were significantly higher in several of the strongest tech submarkets, notably East Cambridge (87%), Santa Monica (85%) and Mountain View (73%). On average, vacancy rates in these three submarkets were 660 basis points (bps) lower than their respective market-wide vacancy rates; the same figure for the Tech-Thirty was 280 bps. In several emerging tech submarkets, rent discounts are available; these include Reston/Herndon (-23%), St. Louis CBD (-17%) and Northeast Charlotte (-12%). With rental rates less than the average market rate and a rising pool of talent, these submarkets are poised to attract further tech tenants. Furthermore, with the exception of the Reston/ Herndon submarket of Washington, D.C., these submarkets are recording positive—and in some cases strong—rent growth, indicating improving fundamentals and room for growth.



FIGURE 6
TECH-THIRTY MARKETS AND SUBMARKETS AGGREGATE
ANNUAL AVERAGE ASKING RENT



# High-Tech Industry Outlook



Technological advancement is increasingly integral to business productivity, and has bolstered the current U.S. economic expansion. Strong business and consumer demand for technology services and tech innovation is expected to support continued hiring among high-tech firms. The Index of Consumer Technology Expectations (Figure 7), which measures anticipated spending on technology, remains on an upward trend—illustrating the avid consumer demand for new and innovative technology. Sustained consumption is a boon to high-tech companies and the office market clusters in which they locate. This trend should further bolster office-using employment among the Tech-Thirty.

Overall, national indicators show economic fundamentals to remain strong, and our outlook calls for continued growth over the next two years. The rapid high-tech industry expansion of the past five years has increased concern over growth sustainability—especially given the tech talent labor shortage—and how high-tech companies will endure business cycle changes. When the next downturn occurs, markets with large technology clusters could experience disproportionately negative effects.

Venture capital (VC) investment, particularly in the software and media/entertainment sectors, remains the

driving force behind the expanding high-tech industry and its impact on Tech-Thirty office markets. The annual level of VC funding in these two sectors nearly doubled from 2013 to 2014, according to data from Thompson Reuters for the PricewaterhouseCoopers/National Venture Capital Association's MoneyTree Report. Their share of total VC funding also has increased significantly, from less than 40% throughout the dot-com era to more than 50% in 2014 and Q1 2015. A continued high level of VC funding will be critical to sustaining employment and office market growth in tech-driven markets. The trend in San Francisco office asking rents illustrates this, having tracked closely with overall VC funding levels over the past 20 years (Figure 8).

Another of the current cycle's significant differences from 1999-2000 is the large number of tech companies that remain private rather than filing IPOs. Although the profitability of newly public technology companies has eroded significantly in recent years, according to Jay Ritter—a University of Florida professor who analyzes IPOs—the number of technology IPOs has been a fraction of those at the dot-com era's peak, when the IPO was the primary exit strategy of many technology firms. The shift toward companies remaining private for longer is evident in the surge in late-stage VC funding in software and

FIGURE 7
U.S. INDEX OF CONSUMER TECHNOLOGY EXPECTATIONS
(FOR SPENDING)



Source: Consumer Electronics Association, July 2015.

# U.S. VENTURE CAPITAL FUNDING FOR SOFTWARE & MEDIA/ENTERTAINMENT SECTOR VS. SAN FRANCISCO OFFICE AVERAGE ASKING RENT



Source: PwC MoneyTree and CBRE Research, July 2015.



media/entertainment companies, which is now nearly equivalent to dot-com era levels (Figure 9). More than 1,500 late-stage VC tech deals occurred over the past five years, versus 1,100 recorded between 1997 and 2001, although a portion of the more recent count involves some companies raising multiple late-stage rounds of capital funding. The rapidly growing number of "unicorns"—a term intended to reflect the rarity of private companies with valuations of more than \$1 billion—has generated fears of overexuberance among investors, particularly given private companies' lower transparency in comparison to public firms. According to venture capital database CB Insights, there are now 118 unicorn companies, collectively valued at nearly half a trillion dollars; the value increase in the first half of 2015 alone was by 47%. For comparison, in 2009 there were just four unicorns with a combined valuation of \$13 billion.

There is a strong link between high-tech funding, high-tech employment and office market growth (Figures 8 and 9). A robust correlation between late-stage VC funding and high-tech hiring has important implications for the office market. Large late-stage funding deals allow companies to scale operations quickly, and expand their employment base. This drives large office expansions and leasing transactions. Investors' willingness to fund technology companies at rising valuations will be critical for continued growth in high-tech hiring and office space demand in primary tech markets.

Public market indices such as the Shiller S&P 500 Cyclically Adjusted PE (CAPE) ratio also reflect rising valuations (Figure 10). Though the CAPE ratio is a measurement of the broader equity market—rather than just the technology sector—it is an important metric for gauging the overall health of the economy and the financing environment; historically, an above-average ratio has preceded the most significant financial market corrections. The current CAPE ratio exceeds the long-term average; however, it is roughly half of the dot-com peak level and remains below the level corresponding to the 2007 financial market crisis. Also, the CAPE ratio for the technology sector is on par with the ratio for the overall S&P 500, indicating that P/E ratios for large public tech companies are not excessive relative to the broader S&P 500. Strong earnings by many major tech companies continue to hold down P/E ratios within the sector—even amid voracious investor demand.

Supported by consumer demand and the growing number of high-tech integrated businesses, fundamentals remain strong for continued improvement in the high-tech industry. Accordingly, office markets in the Tech-Thirty should expand further in the near term. Being mindful about realistic growth expectations, valuations and viable exit strategies will protect commercial real estate investors from some potential losses that were unforeseen during the last tech boom.

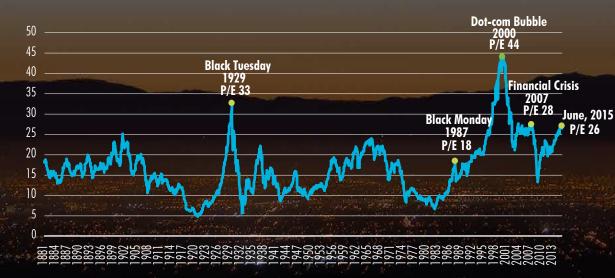


FIGURE 9
U.S. LATE STAGE VENTURE CAPITAL FUNDING FOR SOFTWARE &
MEDIA/ENTERTAINMENT SECTOR VS. U.S. HIGH-TECH
SOFTWARE/SERVICES JOB GROWTH



Source: PwC MoneyTree, U.S. Bureau of Labor Statistics and CBRE Research, July 2015.

FIGURE 10
SHILLER S&P 500 CYCLICALLY ADJUSTED PE RATIO
(CAPE RATIO)



Source: Shiller PE Ratio, July 2015.

# Appendix: Tech-Thirty Employment Categories

Data sources used in this report include industry employment data from the U.S. Bureau of Labor Statistics, Statistics Canada, the PriceWaterhouseCoopers/National Venture Capital Association Moneytree Report, the Shiller S&P 500 Cyclically Adjusted PE Ratio (CAPE Ratio), Consumer Electronics Association, and CBRE Research.



**Bio-Tech** includes scientific research and development services, medical equipment and supplies, pharmaceuticals and medicines, and medical and diagnostic laboratories.



**Design Services** includes architectural and engineering services, and specialized design services.



**High-Tech Manufacturing** includes computer and electronic products, electrical equipment, and other electrical equipment and components.



**High-Tech Services** includes computer systems design and related services, software publishers, data processing, hosting and related services, electronic shopping and electronic auctions, and Internet publishing and broadcasting and web search portals.



**Media-Entertainment** includes motion picture and video production, and advertising and related services.



**Office-Using Jobs** includes professional and business services, financial activities, and information.



**Telecom** includes telecommunications.

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# San Francisco

#### **QUICK STATS**

OFFICE	MARKET	<b>STATS</b>	Ω2	2015
OIIICL	MAKKE	JIMIJ,	WL	2013

OFFICE MARKET STATS, Q2 2015				
Average Asking Rent FS/YR	\$67.99			
Vacancy Rate	5.7%			
New Supply Under Construction	4.5 MSF			
<b>Top Tech Submarket</b> Rents/Vacancy	SOMA \$68.27 / 4.7%			

#### **HIGH-TECH INDUSTRY STATS. 2014**

IIIOII-IECII INDOSIKI SI	IAIS, LUIT
Employment High-Tech Software/Services	56,743
Employment Clustering % of Office-Using Jobs	23.2%
Educational Attainment Residents w/ BA or higher	53.6%
Labor Cost (MSA)	\$118,652

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Stripe	510 Townsend St.	300,000 SF
Uber	555 Market St.	200,000 SF
Fitbit	199 Fremont St.	163.600 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

Rank Market

- Nine leases of 100,000 sq. ft. or more were signed through June 2015, six by high-tech tenants. Overall, the high-tech industry accounts for 56% of completed office leases and 54% of the 5.0 million sq. ft. in active space requirements.
- Tech-heavy submarkets are commanding average asking rents that are at least as high as the CBD rents in their respective markets; in Mission Bay/ China Basin, they have reached \$80 per sq. ft.
- New developments are largely pre-leased, with notable deals including Uber in Mission Bay and Stripe in South of Market.

#### HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

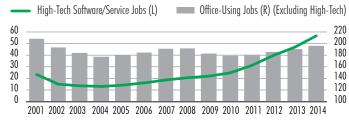
High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period 2012-2014 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14

Kank	Market	2012-2014	2011-2013	Q2'13-Q2'15	QZ1Z-QZ14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

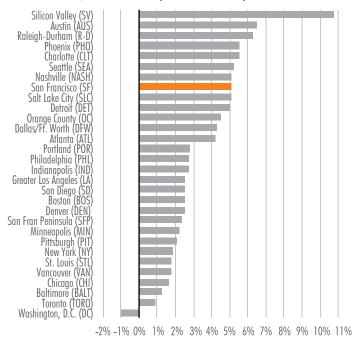
#### **HIGH-TECH SOFTWARE/SERVICES VS.** OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

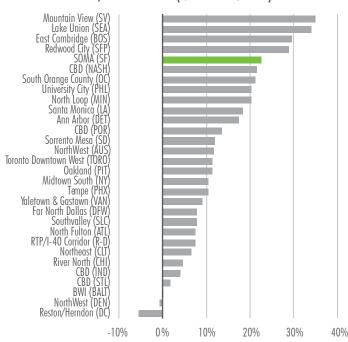


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# **Phoenix**

#### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

OTTICE MARKET STA	13, 42 2013
Average Asking Rent FS/YR	\$22.06
Vacancy Rate	20.1%
New Supply Under Construction	3.6 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	Tempe \$22.08 / 11.0%

#### **TECH INDUSTRY STATS. 2014**

TECH INDOSTRI STATS, EC	
Employment High-Tech Software/Services	42,304
Employment Clustering % of Office-Using Jobs	8.6%
Educational Attainment Residents w/ BA or higher	29.2%
Labor Cost (MSA) Software Engineer	\$92,500

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Zenefits	40 E. Rio Salado Pkwy.	135,700 SF
Infusionsoft	1450 S. Spectrum Blvd.	100,600 SF
Amkor Technology	2045 E. Innovation Cir.	96,000 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

Rank Market

- Tech occupiers' demand for the best amenities in premier locations has caused rental rates in South Scottsdale and Tempe to rise by 20% to 25% over the past 12 months.
- The competitive hiring environment is causing some non-tech users to consider taking space in urban areas with better amenities, in order to better attract millennial workers.
- In South Scottsdale and Tempe, the lack of available space in blocks of 25,000 sq. ft. or more in buildings proximate to walkable amenities has developers jockeying to initiate new projects to chase this demand.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period

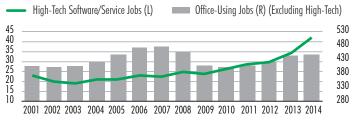
2012-2014 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14

					~ ~
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12 <b>.9</b> %	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

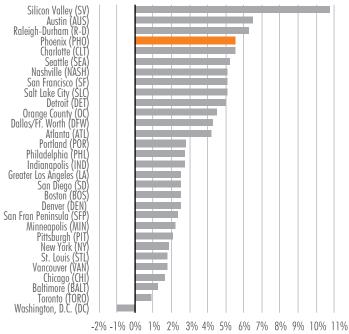
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

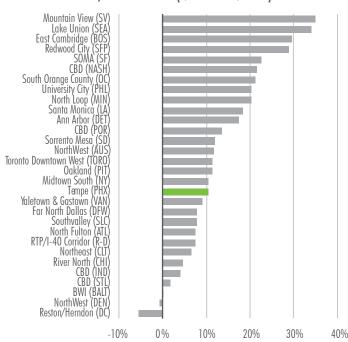


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



## Austin

#### **QUICK STATS**

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OFFICE MARKET STA	TS, Q2 2015	HIGH-TECH INDUSTRY ST	ATS, 2014
Average Asking Rent FS/YR	\$31.33	Employment High-Tech Software/Services	37,541
Vacancy Rate	11.9%	Employment Clustering % of Office-Using Jobs	16.8%
New Supply Under Construction	2.2 MSF	Educational Attainment Residents w/ BA or higher	43.0%
<b>Top Tech Submarket</b> Rents/Vacancy	Northwest \$30.59 / 10.3%	<b>Labor Cost (MSA)</b> Software Engineer	\$96,559

2014

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Confidential	320 Capital of Texas Hwy.	217,500 SF
Confidential	500 W. 2nd St.	207,000 SF
Indeed	6500 N. Capital of Texas Hwy.	172,500 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- One of Austin's premier high-tech companies expanded again in Q1 2015, signing a 207,000 sq. ft. lease in Austin's CBD.
- Austin's high-tech occupiers long tended to cluster in the suburban markets of the Northwest, near Dell and IBM, but that changed when a major internetbased company first came to the CBD in 2008.
- More than 100 high-tech companies are now located in the Austin CBD, where developers have responded to the tight market. The CBD now has the metro's highest concentration of office space under construction, with nearly 670,000 sq. ft. underway.

#### HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period Rank Market **2012-2014** 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14 42.7% 50.9% 30.7% 34.6% San Francisco (SF) 18.6% 2 Phoenix (PHX) 42.7% 8.3% 3.7% 3 Austin (AUS) 33.0% 11.4% 4 Silicon Valley (SV) 27.0% 20.0% 28.1% 21.4% 5 Nashville (NASH) 22.7% 29.6% 8.9% 8.5% 22.7% 6 New York (NY) 22.6% 14.1% 17.5% Seattle (SEA) 18.3% 17.0% 9.4% 8.0% Indianapolis (IND) 18.0% 20.7% 10.9% 9.5% 9 4.3% 13.4% Charlotte (CLT) 17.3% 8.0% 10 Salt Lake City (SLC) 16.2% 15.6% 8.8% 4.1% 11 Portland (POR) 16.1% 12.3% 10.7% 6.1% 15.0% 30.2% 21.0% 19.3% 12 San Francisco Pen. (SFP) 14.9% 19.3% 13 Chicago (CHI) 6.2% 3.5% 14.2% -0.9% 14 Raleigh-Durham (R-D) 16.8% 23.4% 14.1% 2.2% 12.4% 15 Pittsburgh (PIT) 1.8% 9.7% 5.2% 16 Orange County (OC) 12.9% 16.1% 17 Dallas/Ft. Worth (DFW) 10.7% 16.4% 13.4% 12.0% 10.9% 7.2% 18 Minneapolis (MIN) 10.7% 4.5% 19 Denver (DEN) 10.7% 13.3% 11.8% 12.7%

8.5%

8.5%

7.8%

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**6.7**%

5.3%

4.3%

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15.8%

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14.3%

3.6%

30 Washington, D.C. (DC) Ranked by high-tech job growth rate.

20 Boston (BOS)

22 Atlanta (ATL)

St. Louis (STL)

San Diego (SD)

Toronto (TORO)

Baltimore (BAL)

Detroit (DET)

28 Philadelphia (PHL)

29 Vancouver (VAN)

24 Los Angeles (LA)

21

23

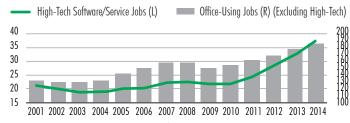
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Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

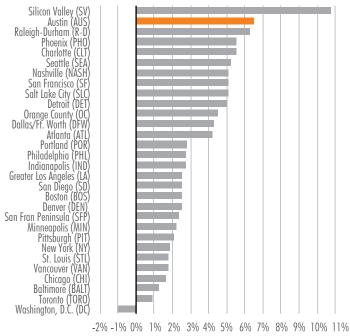
#### **HIGH-TECH SOFTWARE/SERVICES VS.** OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

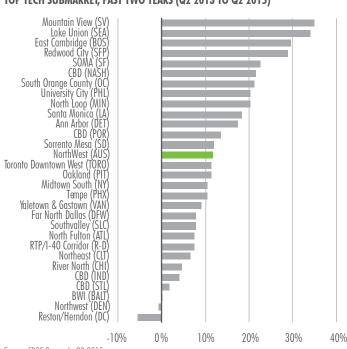


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

2015 TECH-THIRTY | CBRE Research

# Silicon Valley

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

JIIICE MARKET JIA	5/ QL 1015	TECH INDUSTRI STATE	VII
Average Asking Rent FS/YR	\$49.20	Employment High-Tech Software/Services	119,722
Vacancy Rate	7.2%	Employment Clustering % of Office-Using Jobs	39.9%
<b>New Supply</b> Under Construction	8.7 MSF	Educational Attainment Residents w/ BA or higher	47.1%
Top Tech Submarket Rents/Vacancy	Mountain View \$85.14 / 1.4%	<b>Labor Cost (MSA)</b> Software Engineer	\$140,614

**TECH INDUSTRY STATS, 2014** 

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Palo Alto Networks	3325 Scott Blvd.	722,000 SF
LinkedIn	391 San Antonio Rd.	456,600 SF
Confidential	505 Mathilda Ave.	424,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- Since the beginning of 2014, 4.6 million sq. ft. in new development projects has been pre-leased, 99.5% by tech companies.
- Severe space constraints have caused many tech companies to expand southward into areas like Santa Clara and North San Jose.
- These areas offer large blocks of new construction, as well as rents that are much lower than those in Palo Alto, Mountain View and San Francisco.

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period

Rank	Market	2012-2014	2011-2013	Q2'13-Q2'15	Q2'12-Q2'14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
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4	/ / /	27.0%	20.0%	28.1%	
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
	/ \ /	1 <b>6.2</b> %	15.6%	8.8%	4.1%
11	Portland (POR)	1 <b>6.1</b> %	12.3%	10.7%	
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	<b>6.2</b> %	3.5%
14	0 \ /	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12 <b>.9</b> %	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
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21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
	Atlanta (ATL)	<b>7.8</b> %	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
24	Los Angeles (LA)	<b>6.7</b> %	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

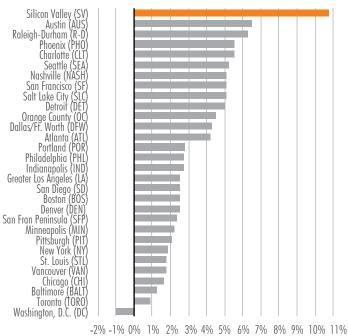
#### **HIGH-TECH SOFTWARE/SERVICES VS.** OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

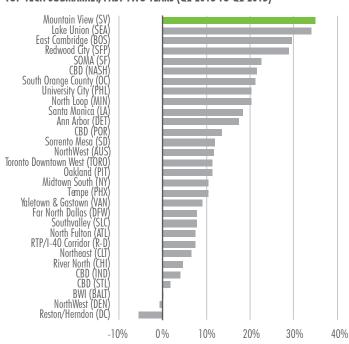


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Nashville

#### **QUICK STATS**

#### OFFICE MADKET STATE OF 2015

OFFICE MARKET STAT	13, 42 2013
Average Asking Rent FS/YR	\$20.46
Vacancy Rate	8.3%
New Supply Under Construction	1.7 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	CBD \$23.17 / 14.1%

#### HIGH-TECH INDUSTRY STATS, 2014

IIIOII-IEGII IIIDOSIKI S	IAID/ LUII
Employment High-Tech Software/Services	11,427
Employment Clustering % of Office-Using Jobs	7.1%
Educational Attainment Residents w/ BA or higher	38.9%
Labor Cost (MSA) Software Engineer	\$84,247

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

ForceX	2200 Charlotte Ave.	36,000 SF
Uniguest	2926 Kraft Dr.	33,000 SF
Uber	209 7th Ave. N	4,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- · Although Nashville's tech industry is small, it is growing quickly and claims the largest percentage of projected IT growth in Tennessee.
- Venture capital funding in Nashville has increased consistently over the past three years, reaching \$153 million in 2014, according to the PWC MoneyTree Report. This funding growth will fuel tech industry expansion and office space demand.
- Super fast internet is coming to Nashville; the city is one of just eight major metros with the service already online or underway. Its presence should foster innovation and attract additional tech companies.

#### HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

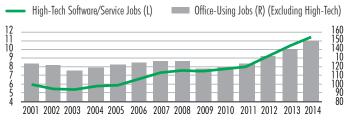
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				Office Market I	Rent Growth
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3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4		27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	<b>8.9</b> %	
6	New York (NY)	22.6%	22.7%	14.1%	
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	
9	\ /	17.3%	13.4%	8.0%	
	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
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	Orange County (OC)	12.9%	9.7%	16.1%	
	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

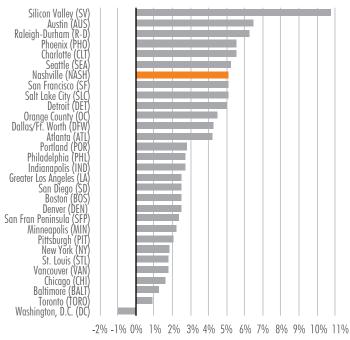
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#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

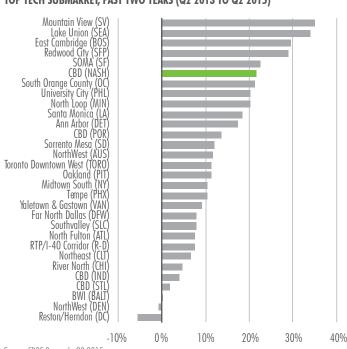


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

2015 TECH-THIRTY | CBRE Research

# New York

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STATS, Q2 2015		TECH INDUSTRY STATS, 2	2014
Average Asking Rent FS/YR	\$69.71	Employment High-Tech Software/Services	86,012
Vacancy Rate	7.1%	Employment Clustering % of Office-Using Jobs	8.3%
New Supply Under Construction	9.3 MSF	Educational Attainment Residents w/ BA or higher	60.4%
Top Tech Submarket Rents/Vacancy	Midtown South \$70.09 / 5.0%	<b>Labor Cost (MSA)</b> Software Engineer	\$111,682

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

PayPal	95 Morton St.	95,100 SF
PlaceIQ, Inc.	5 Bryant Park	45,300 SF
SoundCloud	50 W 23rd St.	43.100 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- · High-tech leasing activity remains the driving force of office occupancy in Midtown South Manhattan; through June 2015, 1.2 million sq. ft. of space was leased by tech companies. Fifty-four percent was in Midtown South.
- With available space limited, tech companies are being pushed into other submarkets; in Midtown South, space larger than 10,000 sq. ft. will not be available for another three years.
- Rental rates in this top tech submarket continue to reach all-time highs tech tenants' average base rent is more than \$70 per sq. ft.

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

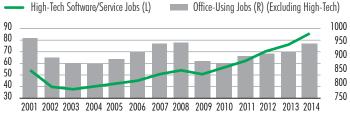
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18	Minneapolis (MIN)	10.7%			7.2%
19	Denver (DEN)	10.7%			12.7%
	Boston (BOS)	8.5%			11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %			8.6%
24	Los Angeles (LA)	6.7%			0.6%
25	Toronto (TORO)	5.3%		5.0%	0.5%
	Baltimore (BAL)	4.3%			3.7%
27	Detroit (DET)	3.5%		2.9%	-0.7%
28	Philadelphia (PHL)	2.5%		3.0%	2.2%
	Vancouver (VAN)	2.4%			14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

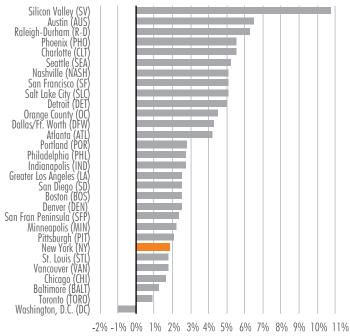
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

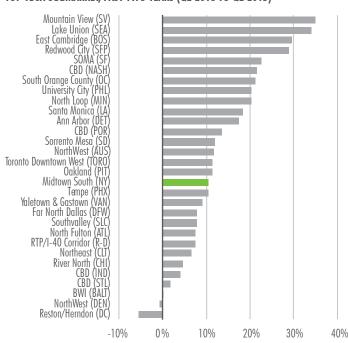


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Seattle

#### **QUICK STATS**

#### DEELCE MADVET STATS OF 2015

OFFICE MARKET STA	HIGH-IE	
Average Asking Rent FS/YR	\$32.39	Employm High-Tech S
Vacancy Rate	12.8%	<b>Employm</b> % of Office
New Supply Under Construction	6.5 MSF	<b>Education</b> Residents v
<b>Top Tech Submarket</b> Rents/Vacancy	Lake Union \$42.02 / 10.6%	<b>Labor Cos</b> Software Er

#### **HIGH-TECH INDUSTRY STATS, 2014**

	-
Employment High-Tech Software/Services	121,672
Employment Clustering % of Office-Using Jobs	34.2%
Educational Attainment Residents w/ BA or higher	45.9%
Labor Cost (MSA)	\$117,192

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Confidential	307 Fairview Ave. N	800,000 SF
Expedia	1201 Amgen Ct. W	550,000 SF
Facebook	1101 Dexter Ave. N	274,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- The past 12 months have seen more than 3.0 million sq. ft. of new leasing activity by tech tenants, accounting for 41% of the total square footage leased
- Competition for tech talent is a central theme in occupiers' workplace strategies.
- The University of Washington and Tsinghua University have partnered to create the Global Innovation Exchange (GIX), an institute with the goal of educating the next generation of innovators. GIX is finalizing a lease to initially occupy 100,000 sq. ft. at the Spring District.

#### HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

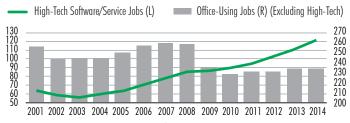
High Took Joh Crowth Office Market Done Crowth

		High-Tech Job Growth			Rent Growth
Rank	Market	Current Period 2012-2014		Current Period Q2'13-Q2'15	
	San Francisco (SF)	42.7%	50.9%	30.7%	
2		42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	\ /	22.6%	22.7%	14.1%	17.5%
7		18.3%	17.0%	9.4%	
	Indianapolis (IND)	18.0%	20.7%	10.9%	
9		17.3%	13.4%	8.0%	
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
24		6.7%	11.9%	4.0%	
	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	\ /	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	
	Vancouver (VAN)	2.4%	18.7%	18.4%	
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

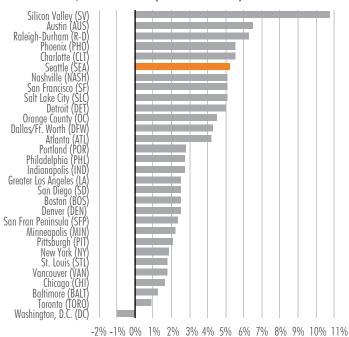
#### **HIGH-TECH SOFTWARE/SERVICES VS.** OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

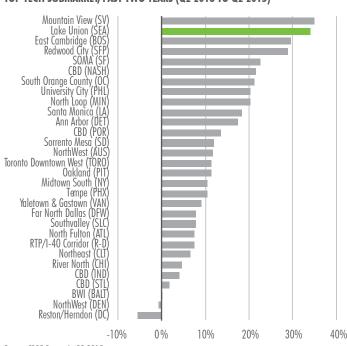


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Indianapolis

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STATS, Q2 2015		TECH INDUSTRY STATS, 2	014
Average Asking Rent FS/YR	\$17.81	Employment High-Tech Software/Services	19,959
Vacancy Rate	17.5%	Employment Clustering % of Office-Using Jobs	8.8%
New Supply Under Construction	143,000 SF	Educational Attainment Residents w/ BA or higher	30.8%
<b>Top Tech Submarket</b> Rents/Vacancy	CBD \$18.88 / 19.7%	<b>Labor Cost (MSA)</b> Software Engineer	\$87,867

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

InDesign LLC	8225 E. 56th St.	29,900 SF
Synovia Solutions	9380 Priority Way South Dr.	11,400 SF
Kronos Inc.	101 W. Washington St.	10,900 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- Multiple local colleges provide a talent pool for tech companies that expand or relocate to the area.
- Compared to other U.S. tech hubs, office rents and the cost of living are relatively low in Indianapolis, which is attracting companies to the area.
- Tech companies are buying or leasing older buildings in the CBD and converting them to creative, open-space formats.

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

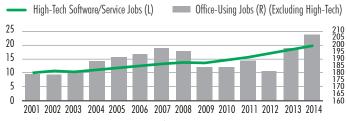
**High-Tech Job Growth Office Market Rent Growth** Current Period Prior Period Current Period Prior Period

Rank	Market	2012-2014		Q2'13-Q2'15	
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%			-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

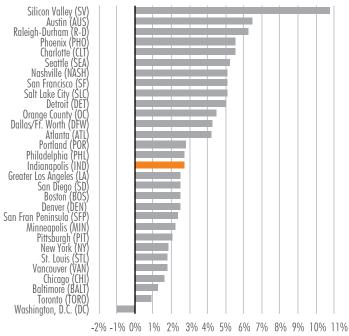
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

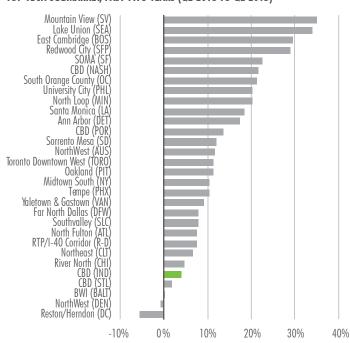


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Charlotte

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

	0, 42 2010	
Average Asking Rent \$21.7		
Vacancy Rate	9.8%	
New Supply Under Construction	343,000 SF	
<b>Top Tech Submarket</b> Rents/Vacancy	Northeast \$19.07 / 9.7%	

#### HIGH-TECH INDUSTRY STATS, 2014

	,
Employment High-Tech Software/Services	19,389
Employment Clustering % of Office-Using Jobs	6.9%
Educational Attainment Residents w/ BA or higher	41.9%
Labor Cost (MSA) Software Engineer	\$97,402

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Thinkgate LLC	201 S Tryon St.	21,200 SF
Kinetic Concepts, Inc.	10101 Claude Freeman Dr.	18,300 SF
NorComp	3810 Shutterfly Rd.	16,000 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- Tech companies have increased their interest in Charlotte; from startups to large corporate users, firms are actively searching for available space.
- Charlotte's young, diverse workforce—supplied by several highly respected
  and high-profile area colleges and universities—is one of the reasons tech
  firms are attracted to the area.
- Tech incubators have emerged—particularly in the CBD—to foster tech startups and create an environment for companies to succeed and grow.
- Charlotte being a super fast internet market, we expect expansion from high-tech companies there.

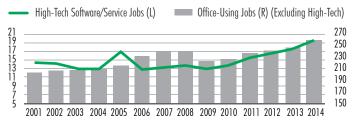
# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

		High-Tech Job Growth		Office Market I	Rent Growth
Dl.	Mandant	Current Period		Current Period	
Kank	Market	2012-2014		Q2'13-Q2'15	
	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2		42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
24	0 \ /	<b>6.7</b> %	11.9%	4.0%	0.6%
	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

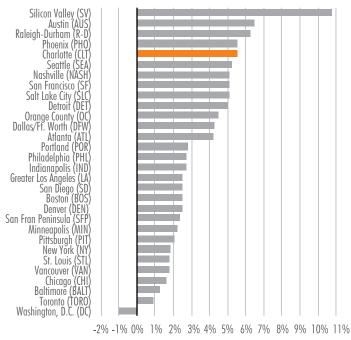
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

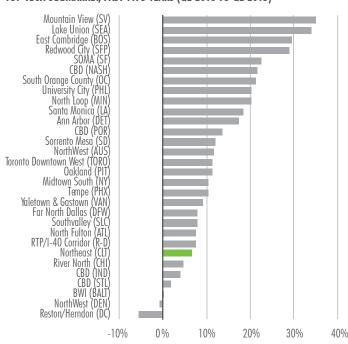


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

2015 TECH-THIRTY | CBRE Research

# Salt Lake City

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STAT	3, QZ ZUIJ
Average Asking Rent FS/YR	\$21.59
Vacancy Rate	10.8%
New Supply Under Construction	1.3 MSF
Top Tech Submarket Rents/Vacancy	Southvalley

#### **TECH INDUSTRY STATS, 2014**

TECH INDOSTRI STATS, 20	017
Employment High-Tech Software/Services	39,968
Employment Clustering % of Office-Using Jobs	15.2%
Educational Attainment Residents w/ BA or higher	32.4%
<b>Labor Cost (MSA)</b> Software Engineer	\$93,409

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Ancestry.com	3900 N Traverse Mountain Blvd.	200,000 SF
Thumbtack	12992 S Frontrunner Blvd.	50,000 SF
Maritz CX	3451 N Triumph Blvs.	48,000 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- Tech broadened its footprint in Salt Lake City during the past year, but remained concentrated in the Southvalley submarket.
- More than 50% of the 1.3 million sq. ft. of office space currently under construction is in the tech-driven Southvalley.
- A high level of venture capital funding in the area indicates a healthy hightech sector that is primed for continued growth.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period
2012-2014 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14

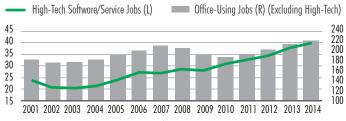
Rank	Market		2011-2013	Q2'13-Q2'15	
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
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6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%		10.9%	9.5%
9	Charlotte (CLT)	17.3%		8.0%	4.3%
10	Salt Lake City (SLC)	16.2%		8.8%	4.1%
11	Portland (POR)	<b>16.1</b> %		10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%		21.0%	19.3%
	Chicago (CHI)	14.9%		6.2%	3.5%
14	0 \ /	14.2%			
	Pittsburgh (PIT)	14.1%			1.8%
	Orange County (OC)	12 <b>.9</b> %		16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%		13.4%	12.0%
	Minneapolis (MIN)	10.7%		10.9%	7.2%
19	\ /	10.7%			12.7%
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22	Atlanta (ATL)	7.8%		6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %		12.7%	8.6%
	Los Angeles (LA)	6.7%		4.0%	0.6%
	Toronto (TORO)	5.3%		5.0%	0.5%
	Baltimore (BAL)	4.3%		1.0%	
27	Detroit (DET)	3.5%		2.9%	-0.7%
28	Philadelphia (PHL)	2.5%		3.0%	2.2%
	Vancouver (VAN)	2.4%		18.4%	
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

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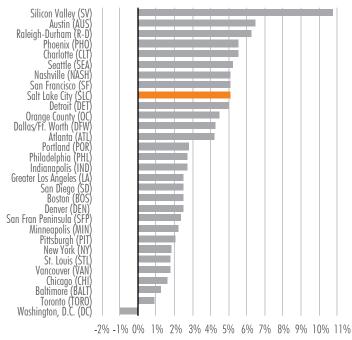
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

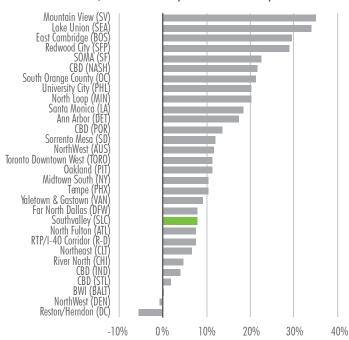


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# **Portland**

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

office marker state, at 1015		IIIOII-ILCII IIIDOJIKI JI	AIS/ LUII
<b>Average Asking Rent</b> FS/YR	\$23.36	Employment High-Tech Software/Services	24,497
Vacancy Rate	11.4%	Employment Clustering % of Office-Using Jobs	10.5%
<b>New Supply</b> Under Construction	787,000 SF	Educational Attainment Residents w/ BA or higher	38.4%
Top Tech Submarket Rents/Vacancy	CBD \$26.88 / 9.9%	<b>Labor Cost (MSA)</b> Software Engineer	\$95,616

**HIGH-TECH INDUSTRY STATS. 2014** 

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Wacom Technology Corp.	1455 NW Irving St.	65,400 SF
CollegeNET	805 SW Broadway St.	44,700 SF
DiscoverOrg	805 Broadway St.	27,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- · The ever-increasing costs of housing and salaries in tech hubs like San Francisco and Silicon Valley make Portland an appealing alternative for employers to recruit talent.
- Tech companies are a significant source of office space demand in Portland; in 2014, they accounted for more than one-third of the top leasing transactions.
- Demand for space is so strong that speculative construction is on the rise for the first time since the Great Recession.

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

Rank	Market	High-Tech J Current Period 2012-2014		Office Market F Current Period Q2'13-Q2'15	Prior Period
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
- 11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

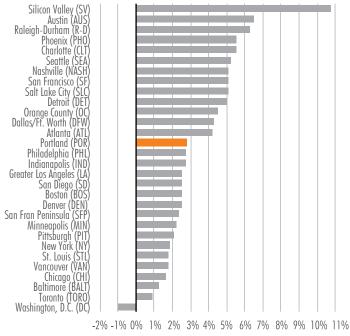
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

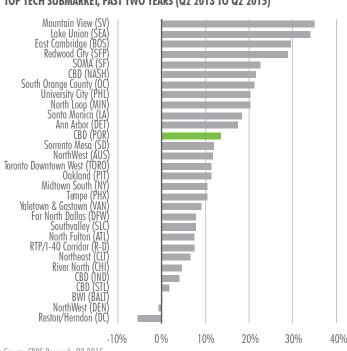


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



### San Francisco Peninsula

#### **QUICK STATS**

OFFICE	MARKET	2TAT2	02	2015

OFFICE MARKET STAT	3, QZ ZUID
Average Asking Rent FS/YR	\$60.84
Vacancy Rate	8.0%
New Supply Under Construction	1.5 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	Redwood City \$61.68 / 8.3%

#### **TECH INDUSTRY STATS. 2014**

,	
Employment High-Tech Software/Services	38,968
Employment Clustering % of Office-Using Jobs	31.9%
Educational Attainment Residents w/ BA or higher	43.8%
<b>Labor Cost (MSA)</b> Software Engineer	\$118,652

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Tibco Software	3301 Hillview Ave.	292,000 SF
NetSuite	2955 Campus Dr.	128,500 SF
EMC	151 Commonwealth Dr.	118,000 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- In order to be closer to venture capital funding on Sand Hill Road, technology companies located in Menlo Park and Palo Alto are willing to pay top rental rates in the Bay Area.
- Facebook continues to expand its footprint and has development plans for a third campus at the old TE Connectivity site.
- Limited available space has spurred development in downtown Redwood
  City; at the same time, some tech companies are moving to North County in
  search of lower rental rates.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period

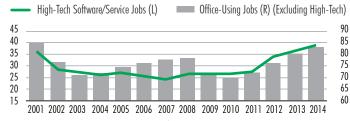
2012-2014 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14

Rank	Market	2012-2014	2011-2013	Q2'13-Q2'15	Q2'12-Q2'14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
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13	Chicago (CHI)	14.9%	19.3%	<b>6.2</b> %	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	
16		12 <b>.9</b> %	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	
	Minneapolis (MIN)	10.7%	4.5%	10.9%	
19	\ /	10.7%	13.3%	11.8%	
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
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22	Atlanta (ATL)	7.8%	10.5%	6.1%	
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
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25	Toronto (TORO)	5.3%	4.2%	5.0%	
26	Baltimore (BAL)	4.3%	10.0%	1.0%	
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
	Philadelphia (PHL)	2.5%	3.9%	3.0%	
29	Vancouver (VAN)	2.4%	18.7%	18.4%	
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

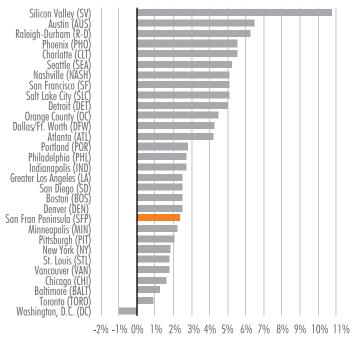
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

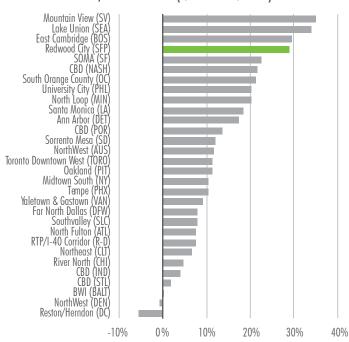


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Chicago

#### **QUICK STATS**

OFFICE MARKET STATS, Q2 2015		HIGH-IECH INDUSTRY ST	AIS, 2014
Average Asking Rent FS/YR	\$28.40	Employment High-Tech Software/Services	78,579
Vacancy Rate	16.1%	Employment Clustering % of Office-Using Jobs	9.2%
New Supply Under Construction	2.6 MSF	Educational Attainment Residents w/ BA or higher	35.5%
<b>Top Tech Submarket</b> Rents/Vacancy	River North \$35.21 / 9.3%	<b>Labor Cost (MSA)</b> Software Engineer	\$90,393

, 2014

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Yelp	222 Merchandise Mart Plz.	132,000 SF
Avant, Inc	222 N LaSalle St.	78,900 SF
SAC Wireless	540 W Madison St.	41,900 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- In the CBD, high-tech has been among the top three industries for leasing activity since 2012, along with financial and legal services.
- The space needs of Chicago high-tech companies are growing because of rapid hiring in the past two years.
- In Q2 2012, tech-related firms represented 6% of all tenants in the CBD, they now account for 8% of the market. Rising from 4.4 to 6.7 million sq. ft., this represents a 54% increase in tech-occupied space,

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

Rank	Market	High-Tech J Current Period 2012-2014	Prior Period	Office Market I Current Period Q2'13-Q2'15	Prior Period
	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	<b>6.2</b> %	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12 <b>.9</b> %	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	<b>7.8</b> %	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
24	Los Angeles (LA)	<b>6.7</b> %	11.9%	4.0%	0.6%
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27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

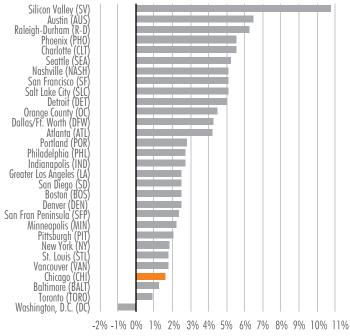
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

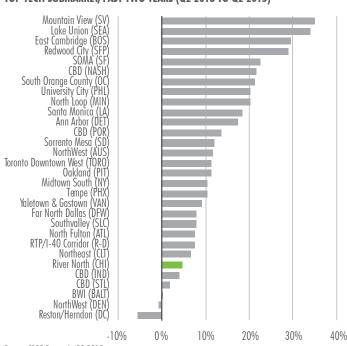


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Raleigh-Durham

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STA	TS, Q2 2015	TECH INDUSTRY STATS, 2014		
Average Asking Rent FS/YR	\$23.31	Employment High-Tech Software/Services	30,892	
Vacancy Rate	14.2%	Employment Clustering % of Office-Using Jobs	15.6%	
New Supply Under Construction	1.7 MSF	Educational Attainment Residents w/ BA or higher	49.5%	
Top Tech Submarket Rents/Vacancy	RTP/I-40 Corridor \$20.03 / 19.2%	<b>Labor Cost (MSA)</b> Software Engineer	\$100,850	

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Allscrips	Midtown Plz.	245,000 SF
Genbrand	5297 S Miami Blvd.	71,000 SF
Synopsis	1101 Slater Rd.	26,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- · Leasing activity remains concentrated in the suburban office market, but tech tenants are focusing their attention on urban areas with a live/work/play
- The amenities available in Downtown Raleigh, Downtown Durham, North Hills and other mixed-use urban areas attract millennials – and both established tech companies and start-ups are following them.
- Raleigh-Durham is a super fast internet market and should foster continued high-tech innovation.

#### **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

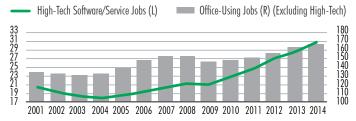
High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period

Rank	Market	2012-2014		Q2'13-Q2'15	Q2'12-Q2'14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
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	Pittsburgh (PIT)	14.1%	2.2%		1.8%
16	0 / ( /	12.9%	9.7%	16.1%	5.2%
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22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	0 , ,	<b>7.6</b> %	4.1%	12.7%	8.6%
24	Los Angeles (LA)	<b>6.7</b> %	11.9%	4.0%	0.6%
		5.3%	4.2%	5.0%	0.5%
	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
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		2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

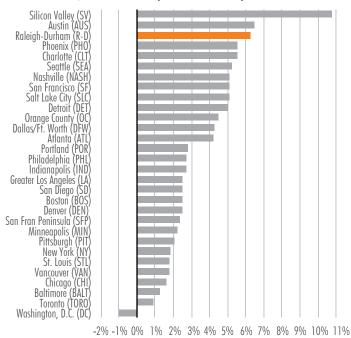
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



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#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

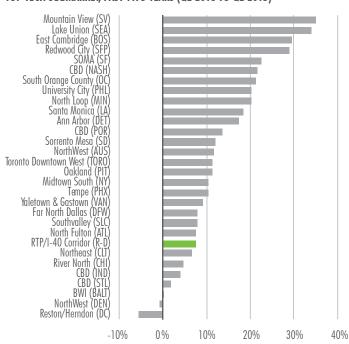


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Pittsburgh

#### **QUICK STATS**

AFFICE	SSADI/ET	CTATC	00	0015
OFFICE	MARKET	21A12	QΖ	2015

OTTICE MARKET STAT	J, QL 2013
Average Asking Rent	\$21.13
Vacancy Rate	10.5%
New Supply Under Construction	1.8 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	0akland \$20.37 / 2.8%

#### HIGH-TECH INDUSTRY STATS, 2014

IIIOII-ILGII IIIDOJIKI JI	AID/ LUII
Employment High-Tech Software/Services	14,028
Employment Clustering % of Office-Using Jobs	5.7%
Educational Attainment Residents w/ BA or higher	32.3%
Labor Cost (MSA) Software Engineer	\$84,640

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

NetApp	800 Cranberry Woods	85,500 SF
Uber Technologies	Restaurant Depot	52,800 SF
M*Modal Services	Murray Ave.	34,000 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- Uber and Carnegie Mellon University partnered to create the Uber Advanced Technologies Center in Pittsburgh to develop software for mapping, driving safety and autonomous vehicles.
- The center of the Pittsburgh tech market keeps expanding beyond Oakland, with neighborhoods like the East End, Lawrenceville, the Strip District, the CBD, the North Side and the South Side all seeing increased concentrations of tech users.
- Several urban redevelopment projects have successfully secured tech companies as early tenants, accelerating the interest in mixed-use environments.

High-Tech Job Growth Office Market Rent Growth

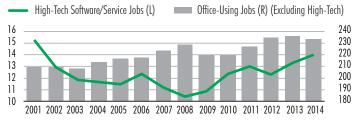
# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

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30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

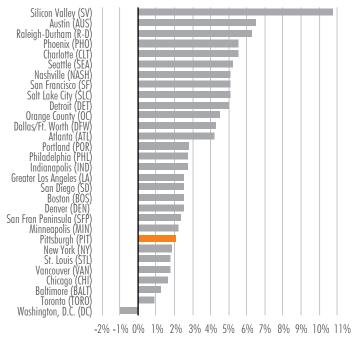
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

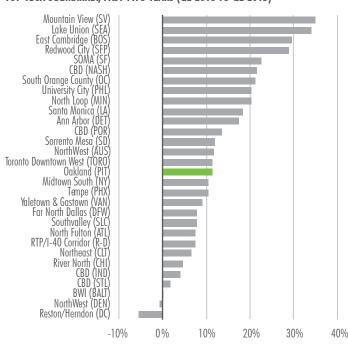


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Orange County

\$28.68 / 6.1%

#### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

	,	,	
Average Asking Rent FS/YR	\$26.76	Employment High-Tech Software/Services	30,134
Vacancy Rate	9.2%	Employment Clustering % of Office-Using Jobs	7.3%
New Supply Under Construction	682,000 SF	Educational Attainment Residents w/ BA or higher	37.3%
Top Tech Submarket	South Orange County	Labor Cost (MSA)	\$109,816

**TECH INDUSTRY STATS, 2014** 

Software Engineer

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Skywork Solutions Inc.	5211 California Ave.	126,900 SF
Kofax LTD.	15201 Laguna Canyon Rd.	91,200 SF
Ellipse Technologies	101 Enterprise	54,000 SF

Source: CBRE Research, Q2 2015.

Rents/Vacancy

#### **HOT TOPICS**

. . . .

- The number of new development projects delivering creative space that tech tenants prefer has increased in recent quarters as supply in the market has tightened.
- Much of the new space will be offered at a premium compared to available space in existing buildings.
- Tech medical device companies are expanding; by attracting tech talent to the region, they are playing an important role in the development of the OC tech market.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth
Current Period Prior Period Current Period Prior Period
2012-2014 2011 2013 02/13 02/15 02/19

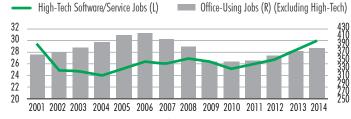
Rank	Market	2012-2014	2011-2013	Q2'13-Q2'15	Q2'12-Q2'14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
	Orange County (OC)	12. <b>9</b> %	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

© 2015, CBRE, Inc.

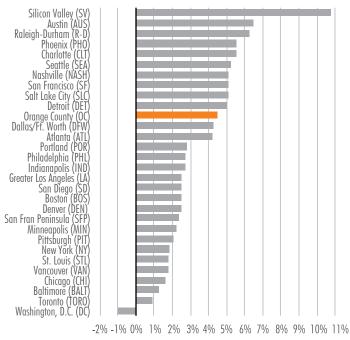
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

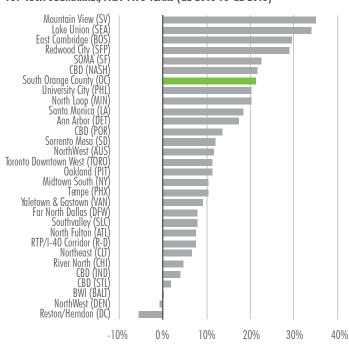


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Dallas/Ft. Worth

#### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STA	TS, Q2 2015	HIGH-TECH INDUSTRY STATS, 2014		
Average Asking Rent FS/YR	\$20.75	Employment High-Tech Software/Services	84,507	
Vacancy Rate	17.9%	Employment Clustering % of Office-Using Jobs	9.9%	
New Supply Under Construction	7.2 MSF	Educational Attainment Residents w/ BA or higher	34.1%	
Top Tech Submarket Rents/Vacancy	Far North Dallas	<b>Labor Cost (MSA)</b> Software Engineer	\$100,033	

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

RealPage	2201 Lakeside Blv.	400,000 SF
CoreLogic	Hackberry Rd. and Ranch Trl.	327,200 SF
Samsung	400 Dividend Dr.	156,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

- Consolidations and expansions are causing high-tech occupiers in Dallas/Ft. Worth to require more office space, mainly in North Dallas.
- CoreLogic is combining its area offices into one 327,183 sq. ft. campus in the Cypress Waters development, with the relocation taking place in 2017.
- The software developer RealPage plans to add 500 jobs over the next year, outgrowing its current location and consolidating its 1,400 employees into one Richardson-based campus.

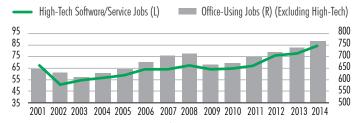
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16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

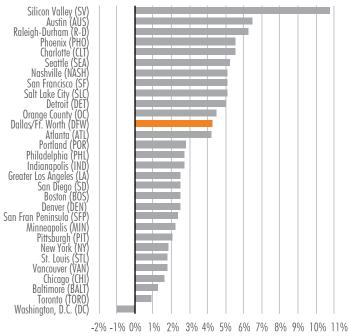
#### **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

#### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

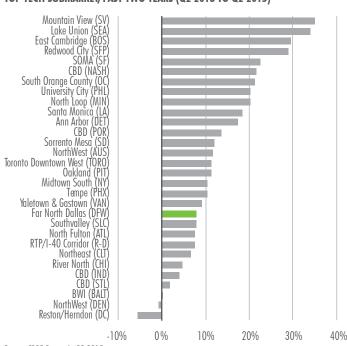


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

2015 TECH-THIRTY | CBRE Research

# **Minneapolis**

### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STATS, Q2 2015		TECH INDUSTRY STATS, 2	014
Average Asking Rent FS/YR	\$24.86	Employment High-Tech Software/Services	45,997
Vacancy Rate	15.4%	Employment Clustering % of Office-Using Jobs	8.5%
<b>New Supply</b> Under Construction	180,000 SF	Educational Attainment Residents w/ BA or higher	39.3%
Top Tech Submarket Rents/Vacancy	North Loop \$24.03 / 8.1%	<b>Labor Cost (MSA)</b> Software Engineer	\$94,869

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

JAMF Software	100 Washington Ave. S	52,100 SF
McKesson Technologies	2700 Snelling Ave.	25,500 SF
Mednet	110 Cheshire Ln.	20,000 SF

Source: CBRE Research, Q2 2015.

#### HOT TOPICS

Dank Market

- A highly educated workforce and burgeoning tech startup community have led to a growing number of tech companies being located in the Twin Cities.
- Tech companies continue to gravitate to non-traditional office space just outside the downtown core, in the North Loop and Northeast submarkets.
- A dearth of large contiguous blocks of space has spurred developers to buy old warehouse buildings, refurbishing them into non-traditional office space.
- The downtown core also benefits from tech company expansion, offering amenities such as fitness centers and access to the light rail.

# **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

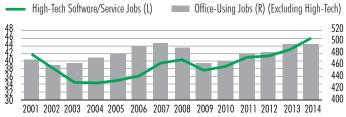
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

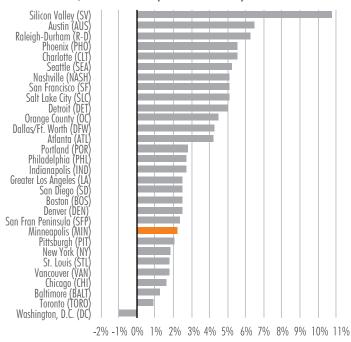
# **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

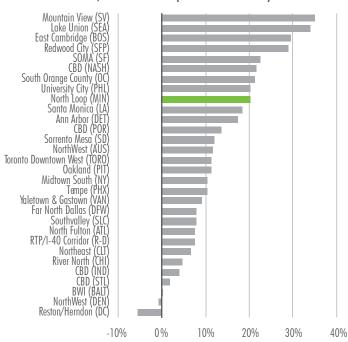


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Denver

### **QUICK STATS**

OFFICE	MARKET	2TAT2	02	201	5
OFFICE	MAKKEL	JIAIJ.	wz	2 U I	J

OFFICE MAKKET STA	15, Q2 2015
Average Asking Rent FS/YR	\$24.15
Vacancy Rate	13.2%
New Supply Under Construction	3.1 MSF
Top Tech Submarket Rents/Vacancy	NorthWest \$24.54 / 15.3%

#### HIGH-TECH INDUSTRY STATS, 2014

	,
Employment High-Tech Software/Services	58,014
Employment Clustering % of Office-Using Jobs	13.5%
Educational Attainment Residents w/ BA or higher	42.2%
Labor Cost (MSA)	\$102,245

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Confidential	2930 Pearl St.	200,000 SF
Four Winds Interactive	1221 Broadway St.	53,000 SF
Travelport	9200 E Panorama Cir.	35,000 SF

Source: CBRE Research, Q2 2015.

### **HOT TOPICS**

- High-tech tenants accounted for more than 8.0% of the active tenants in the CBD in Q2 2015, compared to just over 4.0% a year earlier.
- Over the past 18 months, high-tech was the third largest demand driver for deals larger than 10,000 sq. ft., accounting for 11.8% of total activity.
- The bulk of high-tech-occupied space remains in the Northwest and Boulder submarkets.
- Startups and smaller tech companies prefer the Downtown Boulder and Downtown Denver submarkets, where creative space is readily available and companies have access to a talented labor pool.

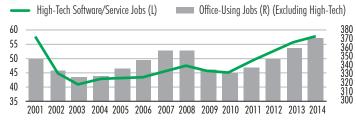
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High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period Rank Market **2012-2014** 2011-2013 Q2'13-Q2'15 Q2'12-Q2'14 42.7% 50.9% 30.7% 34.6% San Francisco (SF) Phoenix (PHX) 18.6% 8.3% 3.7% 2 42.7% 3 Austin (AUS) 33.0% 33.7% 11.4% 12.2% Silicon Valley (SV) 27.0% 20.0% 28.1% 21.4% 4 5 Nashville (NASH) 22.7% 29.6% 8.9% 8.5% 22.7% New York (NY) 22.6% 14.1% 17.5% Seattle (SEA) 18.3% 17.0% 9.4% 8.0% Indianapolis (IND) 18.0% 20.7% 10.9% 9.5% 9 Charlotte (CLT) 13.4% 8.0% 4.3% 17.3% 10 Salt Lake City (SLC) 16.2% 15.6% 8.8% 4.1% 11 Portland (POR) 16.1% 12.3% 10.7% 6.1% 15.0% 30.2% 21.0% 19.3% San Francisco Pen. (SFP) 14.9% 19.3% Chicago (CHI) 6.2% 3.5% 14.2% 16.8% -0.9% Raleigh-Durham (R-D) 23.4% 14.1% 2.2% 12.4% Pittsburgh (PIT) 1.8% 15 9.7% 5.2% 16 Orange County (OC) 12.9% 16.1% 17 Dallas/Ft. Worth (DFW) 10.7% 16.4% 13.4% 12.0% Minneapolis (MIN) 10.7% 4.5% 10.9% 7.2% 18 10.7% 19 Denver (DEN) 13.3% 11.8% 20 Boston (BOS) 8.5% 15.8% 14.4% 11.2% 21 St. Louis (STL) 8.5% 24.6% 3.1% 1.4% 22 Atlanta (ATL) 7.8% 10.5% 6.1% 3.3% San Diego (SD) 23 7.6% 4.1% 12.7% 8.6% 6.7% 11.9% 24 Los Angeles (LA) 4.0% 0.6% 25 Toronto (TORO) 5.3% 4.2% 5.0% 0.5% Baltimore (BAL) 4.3% 10.0% 1.0% 3.7% 26 27 Detroit (DET) 3.5% 7.7% 2.9% -0.7% 28 Philadelphia (PHL) 2.5% 3.9% 3.0% 2.2% 14.3% 29 Vancouver (VAN) 2.4% 18.7% 18.4% 30 Washington, D.C. (DC) -2.2% 0.8% 3.4% 3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

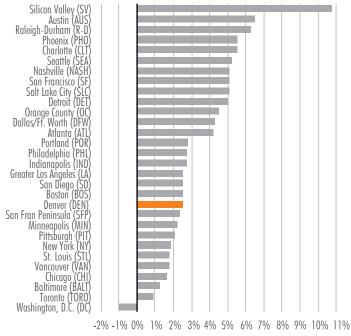
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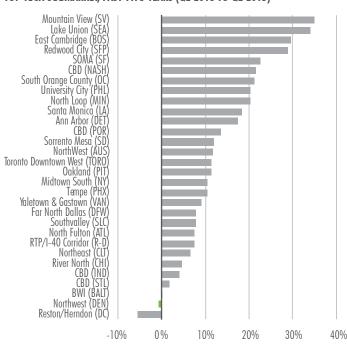


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Net absorption growth as a % of market's inventory

### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

# Boston

### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OTTICE MARKET STATS, WZ 2015		ILCII INDOSINI SIAIS, 2017		
Average Asking Rent FS/YR	\$33.77	Employment High-Tech Software/Services	99,284	
Vacancy Rate	12.4%	Employment Clustering % of Office-Using Jobs	16.1%	
New Supply Under Construction	5.1 MSF	Educational Attainment Residents w/ BA or higher	46.9%	
<b>Top Tech Submarket</b> Rents/Vacancy	East Cambridge \$63.37 / 4.1%	<b>Labor Cost (MSA)</b> Software Engineer	\$114,353	

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Autodesk	21-25 Drydock Ave.	72,000 SF
Akamai	50 Hampshire St.	65,824 SF
Broadcom	200 Brickstone Sq.	61,000 SF

Source: CBRE Research, Q2 2015.

# **HOT TOPICS**

- Generating a constant stream of highly qualified tech workers, Harvard and MIT make East Cambridge one of the hottest tech markets in the country.
- Boston and Cambridge have a number of co-working spaces, the vast majority of which are geared specifically toward the small technology tenant.
- Proximity to some of the world's most prestigious healthcare organizations supports growth in the digital health sector, and increases demand for a large pool of talent.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

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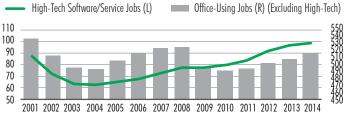
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22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	<b>7.6</b> %	4.1%	12.7%	8.6%
24	Los Angeles (LA)	<b>6.7</b> %	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

TECH INDUCTOR STATE 2014

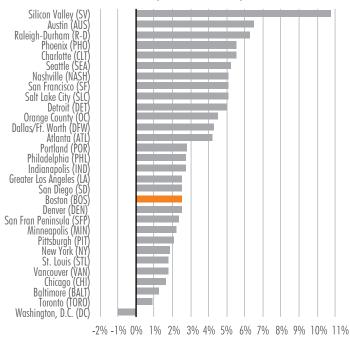
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

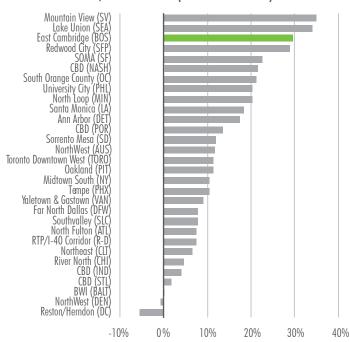


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

© 2015, CBRE, Inc.

# St. Louis

### **QUICK STATS**

#### OFFICE MARKET STATS, Q2 2015

OFFICE MARKET STATE	3, QZ ZUI3
Average Asking Rent FS/YR	\$18.58
Vacancy Rate	16.3%
New Supply Under Construction	0 SF
<b>Top Tech Submarket</b> Rents/Vacancy	CBD \$15.42 / 28%

#### HIGH-TECH INDUSTRY STATS, 2014

IIIOII-IECII INDOSIKI .	JIAIS, LUIT
Employment High-Tech Software/Services	21,230
Employment Clustering % of Office-Using Jobs	7.3%
Educational Attainment Residents w/ BA or higher	36.7%
Labor Cost (MSA)	\$95,755

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Ricoh	1400 S. Hwy Dr.	17,300 SF
World Wide Technology	111 Westport Plz	12,900 SF
Industrious	555 Washington Ave.	11,000 SF

Source: CBRE Research, Q2 2015.

### **HOT TOPICS**

- Tech companies are a source of high-wage job creation and support for new construction and the conversion of historical buildings.
- St. Louis is a lower-cost market, and high-tech companies are attracted to the area through Arch grants and state incentives.
- World Wide Technology is planning to build a new seven-story, 225,000-sq.ft., owner-occupied headquarters in Westport Plaza.
- Incubator/shared workspace facilities have grown significantly, with the addition of four large spaces in the last few years.

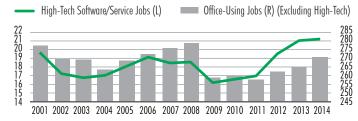
# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

		High-Tech Job Growth		Office Market I	Rent Growth
ь .		Current Period		Current Period	
	Market	2012-2014		Q2'13-Q2'15	
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3		33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	
7	Seattle (SEA)	18.3%	17.0%	9.4%	
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

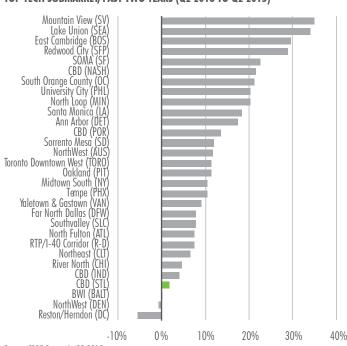


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.



### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

	,
Average Asking Rent FS/YR	\$21.28
Vacancy Rate	18.1%
New Supply Under Construction	500,000 SF
Top Tech Submarket Rents/Vacancy	North Fulton \$20.25 / 15.4%

#### **TECH INDUSTRY STATS, 2014**

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Employment High-Tech Software/Services	67,024
Employment Clustering % of Office-Using Jobs	10.4%
Educational Attainment Residents w/ BA or higher	35.2%
<b>Labor Cost (MSA)</b> Software Engineer	\$94,448

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Fiserv	2900 and 2950 Westside Pkwy.	376,000 SF
Manhattan Associates, Inc.	2300 Windy Ridge Pkwy.	191,000 SF
SITA	3100 Cumberland Blvd.	156,200 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- Georgia Tech is cultivating a startup culture to feed into the area's growing high-tech industry.
- High-paying jobs associated with tech companies and Atlanta's low cost
  of living are attracting millennials from universities across the south to the
  Midtown and West Midtown submarkets.
- Preferring mass transit and other urban amenities, millennials are moving towards the CBD in growing numbers—and tech companies are following. Midtown is starting to attract a larger tech presence, over the more traditional North Fulton submarket.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period
2012-2014 2011-2013 Q2'13-Q2'15 02'12-02'14

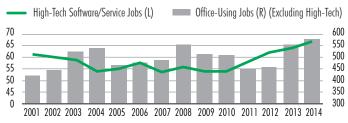
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6	New York (NY)	22.6%	22.7%	14.1%	17.5%
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15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	
16	Orange County (OC)	1 <b>2.9</b> %	9.7%	16.1%	5.2%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

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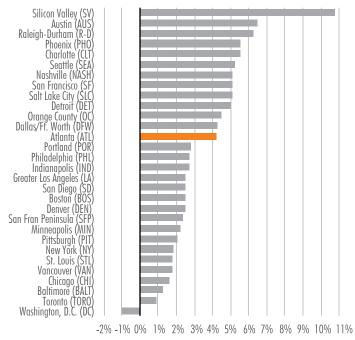
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

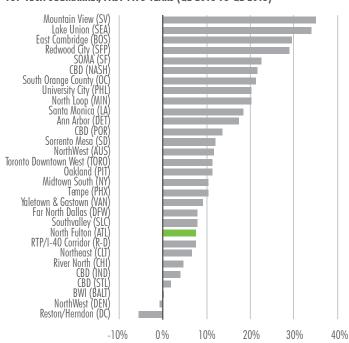


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# San Diego

### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

OTTICE MARKET STAT	OTTICE MARKET STATS, QZ 2015			
Average Asking Rent FS/YR	\$29.88			
Vacancy Rate	12.6%			
New Supply Under Construction	885,000 SF			
<b>Top Tech Submarket</b> Rents/Vacancy	Sorrento Mesa \$32.76 / 14.5%			

#### **HIGH-TECH INDUSTRY STATS. 2014**

IIIOII-IECII INDOSIKI S	1713, 2017
Employment High-Tech Software/Services	27,871
Employment Clustering % of Office-Using Jobs	8.7%
Educational Attainment Residents w/ BA or higher	34.8%
<b>Labor Cost (MSA)</b> Software Engineer	\$95,755

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Illumina	5200 Illumina Way	296,000 SF
Bose	8863 Siempra Viva Rd.	112,000 SF
MaxLinear	5966 La Place Ct.	68,600 SF

Source: CBRE Research, Q2 2015.

#### **HOT TOPICS**

- Despite out-migration of some mature tech companies, many employees have remained in San Diego, fueling rapid growth at younger innovative tech companies, primarily in Sorrento Mesa.
- Technology-based genomics projects by life science companies are increasing significantly, further expanding the region's need for and pool of tech talent.
- The local concentration of military operations supports a thriving defense industry and has established San Diego as a center for cyber-security excellence, with major local universities launching cyber security programs to fuel the growing demand for such skills.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

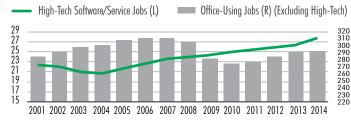
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		High-Tech J	lob Growth	Office Market I	Rent Growth
	ш. Г.			Current Period	
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

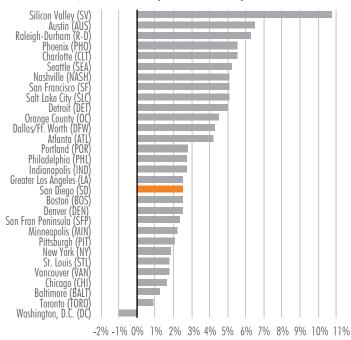
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

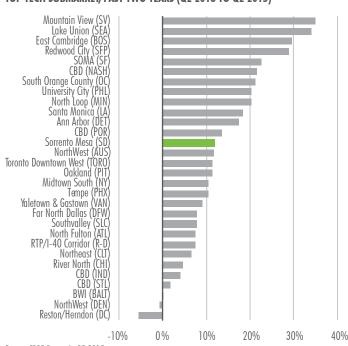


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

# Los Angeles

### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

	-,
Average Asking Rent FS/YR	\$33.36
Vacancy Rate	15.6%
New Supply Under Construction	2.2 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	Santa Monica \$61.68 / 9.3%

#### **TECH INDUSTRY STATS, 2014**

Employment High-Tech Software/Services	60,183
Employment Clustering % of Office-Using Jobs	5.7%
Educational Attainment Residents w/ BA or higher	30.2%
Labor Cost (MSA) Software Engineer	\$110,949

#### SIGNIFICANT OFFICE LEASE DEALS, 2015

Hulu	2450 Broadway	61,700 SF
SnapChat	606-634 Venice Blvd.	44,200 SF
TrueCar	120 N Broadway	38,000 SF

Source: CBRE Research, Q2 2015.

### HOT TOPICS

- High-tech leasing activity took up 1.4 million sq. ft. in 2014; it was tech companies' most active year yet in greater Los Angeles.
- In Santa Monica, 2.31 million sq. ft. of office space is occupied by 158 hightech tenants, making it the largest L.A. submarket for tech firms.
- High-tech companies are beginning to cluster in Playa Vista; a large private investment there could make it the metro's top tech submarket
- Snapchat expanded its footprint in Silicon Beach by leasing 77,995 sq. ft. of office space, accounting for 43% of positive net absorption in the Venice/ Marina Del Rey submarket.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

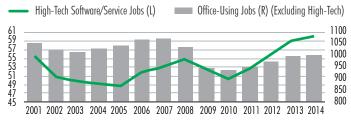
High-Tech Job Growth Office Market Rent Growth Current Period Prior Period Current Period Prior Period

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5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
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	Los Angeles (LA)	<b>6.7</b> %	11.9%	4.0%	
	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
	Baltimore (BAL)	4.3%	10.0%	1.0%	
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

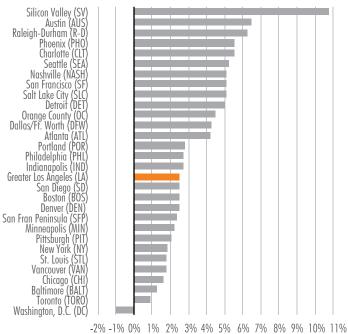
# **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

### **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

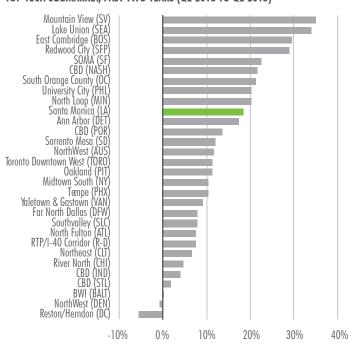


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Toronto

### **QUICK STATS**

DEELCE	MADVET	CTATC	02	2015
OLLICE	MARKET	SIAIS.	W۷	2013

OFFICE MARKET STATS, QZ 2015		HIGH-IECH INDUSTRY STATS, 2014	
Average Asking Rent FS/YR	\$35.48	Employment High-Tech Software/Services	96,800
Vacancy Rate	9.7%	Employment Clustering % of Office-Using Jobs	11.7%
New Supply Under Construction	5.2 MSF	Educational Attainment Residents w/ BA or higher	41.9%
<b>Top Tech Submarket</b> Rents/Vacancy	Toronto Downtown West \$37.74 / 4.7%	<b>Labor Cost (MSA)</b> Software Engineer	\$66,585

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Confidential	120 Bremner Blvd.	126,000 SF
Salesforce.com	10 Bay St.	79,500 SF
Oracle Canada	277 Front St. W	56,100 SF

Source: CBRE Research, Q2 2015.

### HOT TOPICS

- Downtown West and Liberty Village are popular submarkets for high-tech companies, due to a high concentration of "brick-and-beam" space.
- New top-tier buildings in Downtown South, including RBC WaterPark Place and Bremner Tower, have attracted major tech tenants, including Cisco and
- Tech incubation facilities—such as MaRS and the proposed Waterfront Innovation Centre—are increasing in prevalence.

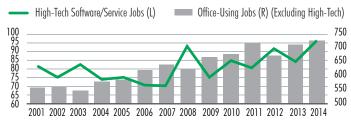
# **HIGH-TECH SOFTWARE/SERVICES JOB** AND OFFICE RENT GROWTH

Rank	Market	High-Tech J Current Period 2012-2014		Office Market I Current Period Q2'13-Q2'15	Prior Period
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

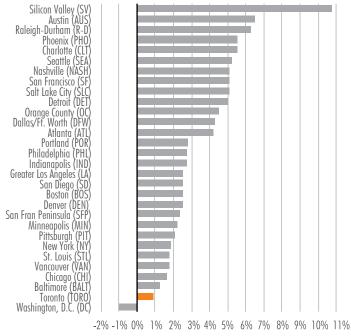
# **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and Statistics Canada, July 2015

## **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

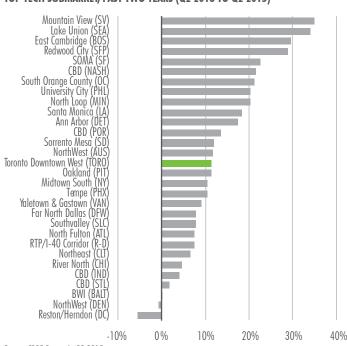


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

# Baltimore

### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

OTTICE MARKET STA	13, 42 2013
Average Asking Rent FS/YR	\$22.72
Vacancy Rate	14.4%
New Supply Under Construction	680,000 SF
<b>Top Tech Submarket</b> Rents/Vacancy	BWI \$24.73 / 13.3%

#### **TECH INDUSTRY STATS, 2014**

Employment High-Tech Software/Services	31,127
Employment Clustering % of Office-Using Jobs	11.2%
Educational Attainment Residents w/ BA or higher	37.2%
Labor Cost (MSA)	\$119,237

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

FEI Systems	9755 Patuxent Woods Dr.	48,800 SF
SafeNet Assured Technologies LLC	3465 Box Hill Corporate Center Dr.	13,700 SF
IP Keys Technologies, LLC	420 National Business Park	7,400 SF

Source: CBRE Research, Q2 2015.

### **HOT TOPICS**

- With tech talent showing a preference toward living in Baltimore City, small to mid-sized technology companies are slowly migrating to the city as well.
- Leasing activity has been robust among government contactor groups which have migrated to be near U.S. Cyber Command at Fort Meade.
- Cyber security firms seeking shorter term leases to be coterminous with length of customer contracts.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period

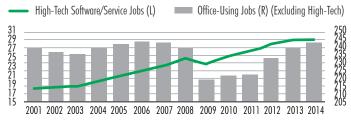
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16	Orange County (OC)	1 <b>2.9</b> %	9.7%	16.1%	5.2%
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18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

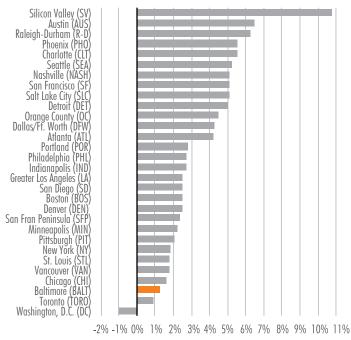
# HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

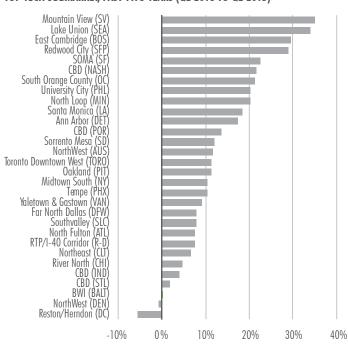


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Detroit

### **QUICK STATS**

OFFICE MARKET STATS, Q2 2015		HIGH-TECH INDUSTRY ST	ATS, 2014
Average Asking Rent FS/YR	\$17.32	Employment High-Tech Software/Services	36,424
Vacancy Rate	19.7%	Employment Clustering % of Office-Using Jobs	7.8%
New Supply Under Construction	85,000 SF	Educational Attainment Residents w/ BA or higher	30.8%
Top Tech Submarket Rents/Vacancy	Ann Arbor \$23.19 / 4.1%	<b>Labor Cost (MSA)</b> Software Engineer	\$92,085

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Hello World	3000 Town Center	43,000 SF
Logicalis	2600 S Telegraph Rd.	40,500 SF
Siemens	400 Morgan Rd.	25,200 SF

Source: CBRE Research, Q2 2015.

### HOT TOPICS

- · Technology firms expanding to Detroit are increasing local demand for creative office space and improving the metro's office market fundamentals.
- Incubator and startup initiatives such as the Madison Block and TechTown are supporting the growing startup activity in Downtown Detroit.
- Automotive manufacturers and suppliers are in a mini renaissance, demanding a more technologically savvy workforce as a result of the growing use of and demand for high-tech cars.
- The University of Michigan and its strong pool of talent contribute to the growth of high-tech companies in Ann Arbor.

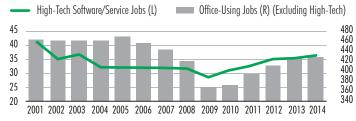
# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

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27	Detroit (DET)	3.5%	7.7%	<b>2.9</b> %	-0.7%
28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

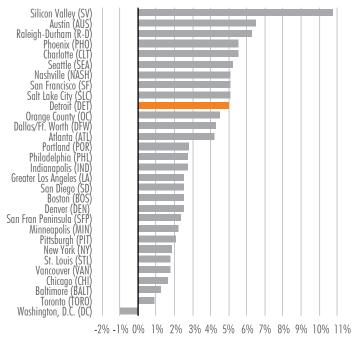
# **HIGH-TECH SOFTWARE/SERVICES VS.** OFFICE-USING JOBS (THOUSANDS)



Source: CBRE Research, Q2 2015 and U.S. Bureau of Labor Statistics, July 2015.

## **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

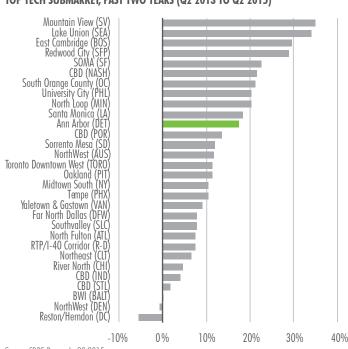


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



Source: CBRE Research, Q2 2015.

# Philadelphia

### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

OTTICE MARKET STAT	J, QZ 2013
Average Asking Rent FS/YR	\$25.76
Vacancy Rate	16.4%
New Supply Under Construction	1.9 MSF
<b>Top Tech Submarket</b> Rents/Vacancy	University City \$37.43 / 4.5%

#### **TECH INDUSTRY STATS, 2014**

TECH INDOSTRI STATS, E	VII
Employment High-Tech Software/Services	37,574
Employment Clustering % of Office-Using Jobs	8.4%
Educational Attainment Residents w/ BA or higher	36.0%
Labor Cost (MSA) Software Engineer	\$95,294

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

C&D Technologies	1400 Union Meeting Rd.	126,800 SF
ABB Process Automation	101 East County Line Rd.	115,000 SF
Analytical Graphics	224 Valley Creek Corporate Center	90,200 SF

Source: CBRE Research, Q2 2015.

### **HOT TOPICS**

- Vast differences in asking rates are emerging, both downtown and in the suburbs, as tech tenant preferences and clustering drive demand in a few select submarkets, including the CBD and University City.
- With only 13 blocks of contiguous Class A space of 100,000 sq. ft. or more available, new development is becoming more active.
- The Comcast Innovation and Technology Center and the expanding University
  City Science Center will add nearly 2.8 million sq. ft. of office and lab space,
  furthering the tech presence in Philadelphia.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth

Current Period Prior Period Current Period Prior Period

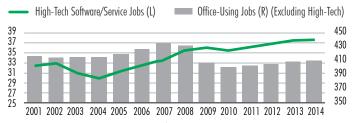
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11	Portland (POR)	1 <b>6.1</b> %	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13		14.9%	19.3%	<b>6.2</b> %	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
	Pittsburgh (PIT)	14.1%	2.2%	12.4%	
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Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015. © 2015, CBRE, Inc.

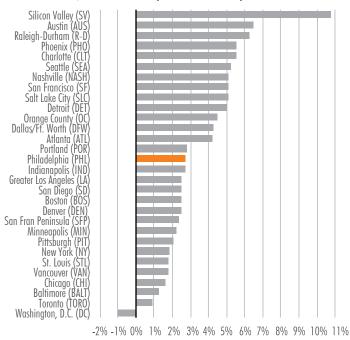
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# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

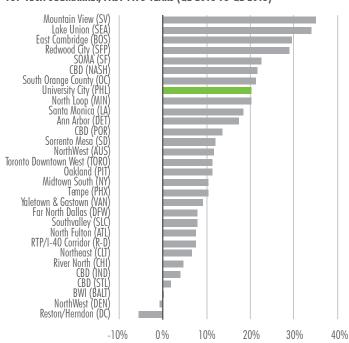


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

#### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Vancouver

### **QUICK STATS**

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OFFICE MARKET STATS, Q2 2015		HIGH-TECH INDUSTRY STATS, 2014		
Average Asking Rent FS/YR	\$40.06	Employment High-Tech Software/Services	34,000	
Vacancy Rate	10.9%	Employment Clustering % of Office-Using Jobs	12.0%	
New Supply Under Construction	2.0 MSF	Educational Attainment Residents w/ BA or higher	45.2%	
Top Tech Submarket Rents/Vacancy	Yaletown & Gastown \$41.78 / 3.4%	<b>Labor Cost (MSA)</b> Software Engineer	\$65,619	

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

Avigilon	555 Robson St.	135,000 SF
Sony Pictures Imageworks	725 Granville St.	75,000 SF
Animal Logic (Warner Brothers)	840 Cambie St.	47,000 SF
Source: CBRE Research, Q2 2015.		

### HOT TOPICS

- · As of mid-year, high-tech tenants represented 44% of current downtown office space requirements.
- The Yaletown and Gastown submarkets remain highly attractive to tech tenants looking for "stick and brick" style premises.
- Low vacancy and rising rental rates in Yaletown and Gastown, however, are pushing tech tenants into neighboring industrial areas, namely Mount Pleasant and Railtown.
- High-tech employment has increased by a very robust 19.7% since 2011, 12 times the rate of total employment.

High Took Joh Crowth Office Market Done Crowth

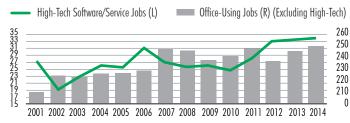
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28	Philadelphia (PHL)	2.5%	3.9%	3.0%	2.2%
29	Vancouver (VAN)	2.4%	18.7%	18.4%	14.3%
30	Washington, D.C. (DC)	-2.2%	0.8%	3.4%	3.6%

Ranked by high-tech job growth rate.

Sources: U.S. Bureau of Labor Statistics and Statistics Canada, July 2015 and CBRE Research, Q2 2015.

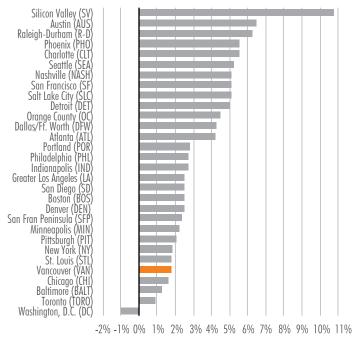
# **HIGH-TECH SOFTWARE/SERVICES VS. OFFICE-USING JOBS (THOUSANDS)**



Source: CBRE Research, Q2 2015 and Statistics Canada, July 2015.

# **NET ABSORPTION GROWTH**

OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

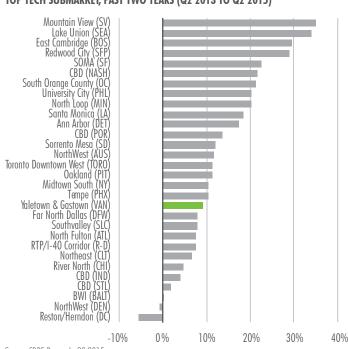


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### RENT GROWTH

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Washington, D.C.

### **QUICK STATS**

#### **OFFICE MARKET STATS, Q2 2015**

Average Asking Rent FS/YR	\$36.68
Vacancy Rate	15.5%
New Supply Under Construction	4.4 MSF
Top Tech Submarket	Reston/Herndon

#### **TECH INDUSTRY STATS, 2014**

,	
Employment High-Tech Software/Services	138,175
Employment Clustering % of Office-Using Jobs	21.2%
Educational Attainment Residents w/ BA or higher	51.5%
Labor Cost (MSA)	\$109,317

#### **SIGNIFICANT OFFICE LEASE DEALS, 2015**

\$28.31 / 15.0%

Confidential	5404 Wisconsin Ave.	133,700 SF
Uber Technologies	1717 Rhode Island Ave. NW	73,800 SF
Palantir Technologies	1025 Thomas Jefferson St. NW	61,000 SF

Source: CBRE Research, Q2 2015.

Rents/Vacancy

### **HOT TOPICS**

- Proximity to the federal government, an educated workforce and rapid growth in venture capital investment support the area's expanding tech community.
- Net new demand in the tech sector has helped offset the negative market effects
  of the federal government.
- D.C. has the second highest concentration of WeWork offices in the country. In Q2 2015, Uber leased 82,000 sq. ft. worth of co-working space in northern Virginia.
- Since 2009, D.C. has seen the highest rate of millennial population growth. The increasingly young population will support the D.C.'s tech talent labor pool.

# HIGH-TECH SOFTWARE/SERVICES JOB AND OFFICE RENT GROWTH

High-Tech Job Growth Office Market Rent Growth
Current Period Prior Period Current Period Prior Period
2012 2014 2011 2012 02/15 02/15 02/16

Rank	Market	2012-2014	2011-2013	Q2'13-Q2'15	Q2'12-Q2'14
1	San Francisco (SF)	42.7%	50.9%	30.7%	34.6%
2	Phoenix (PHX)	42.7%	18.6%	8.3%	3.7%
3	Austin (AUS)	33.0%	33.7%	11.4%	12.2%
4	Silicon Valley (SV)	27.0%	20.0%	28.1%	21.4%
5	Nashville (NASH)	22.7%	29.6%	8.9%	8.5%
6	New York (NY)	22.6%	22.7%	14.1%	17.5%
7	Seattle (SEA)	18.3%	17.0%	9.4%	8.0%
8	Indianapolis (IND)	18.0%	20.7%	10.9%	9.5%
9	Charlotte (CLT)	17.3%	13.4%	8.0%	4.3%
10	Salt Lake City (SLC)	16.2%	15.6%	8.8%	4.1%
11	Portland (POR)	16.1%	12.3%	10.7%	6.1%
12	San Francisco Pen. (SFP)	15.0%	30.2%	21.0%	19.3%
13	Chicago (CHI)	14.9%	19.3%	6.2%	3.5%
14	Raleigh-Durham (R-D)	14.2%	16.8%	23.4%	-0.9%
15	Pittsburgh (PIT)	14.1%	2.2%	12.4%	1.8%
16	Orange County (OC)	12.9%	9.7%	16.1%	5.2%
17	Dallas/Ft. Worth (DFW)	10.7%	16.4%	13.4%	12.0%
18	Minneapolis (MIN)	10.7%	4.5%	10.9%	7.2%
19	Denver (DEN)	10.7%	13.3%	11.8%	12.7%
20	Boston (BOS)	8.5%	15.8%	14.4%	11.2%
21	St. Louis (STL)	8.5%	24.6%	3.1%	1.4%
22	Atlanta (ATL)	7.8%	10.5%	6.1%	3.3%
23	San Diego (SD)	7.6%	4.1%	12.7%	8.6%
24	Los Angeles (LA)	6.7%	11.9%	4.0%	0.6%
25	Toronto (TORO)	5.3%	4.2%	5.0%	0.5%
26	Baltimore (BAL)	4.3%	10.0%	1.0%	3.7%
27	Detroit (DET)	3.5%	7.7%	2.9%	-0.7%
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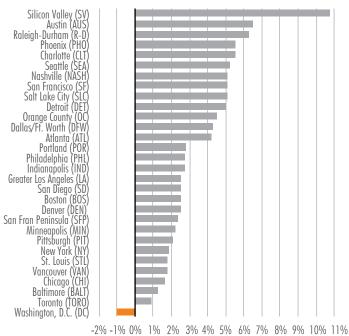
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OVERALL MARKET, PAST TWO YEARS (Q3 2013 - Q2 2015)

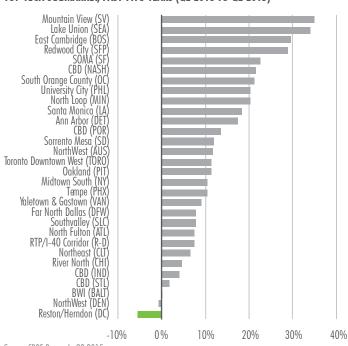


Source: CBRE Research, Q2 2015.

Net absorption growth as a % of market's inventory

### **RENT GROWTH**

TOP TECH SUBMARKET, PAST TWO YEARS (Q2 2013 TO Q2 2015)



# Contacts

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#### WANT TO KNOW MORE ABOUT SCORING TECH TALENT?

CBRE Research recently released a comprehensive report on scoring tech talent across the U.S. The report, "Influencing Innovation, Economic and Real Estate Growth in 50 U.S. Markets", identifies the top markets for tech talent using a proprietary scoring system, explains what tech talent markets look like, and identifies the top tech talent momentum and innovation markets and corresponding operating costs. Download the Scoring Tech Talent: Influencing Innovation, Economic and Real Estate Growth in 50 U.S. Markets.

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